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LIFE OF JAMES WADSWORTH.

(With a Portrait.)

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The late James Wadsworth was descended from a native of the County Palatine of Durham in England, who was among the earlier settlers of the valley of the Connecticut.

The name of the county which gave birth to his ancestor was perpetuated in the township in Connecticut in which the subject of our Memoir was born. His immediate progenitor was the father of three sons, of whom James was the youngest, and who was born on the 20th April, 1768. We have no details of the pursuits of his boyhood, which, however, were no doubt spent in the alternate occupations of agricultural industry and scholastic discipline, until we find him taking his degree of Bachelor of Arts at Yale College, in the twentieth year of his age.

Before he had thus completed his collegiate education, his father had died, and the property upon which the latter had sustained his family in competence, and by whose products he had been enabled to give his sons the best education which the country could furnish, was now to be divided into three portions. Neither of these, it was obvious, would suffice even for the decent maintenance of an individual, far less for the support of a family. Industry, directed by intelligence, was therefore to be looked to in the place of patrimonial fortune, and when united to enterprise and moral courage, might open a way to wealth. All these requisites were united in the characters of James Wadsworth and William, one of his brothers. At the present day, the sons of families under circumstances similar to those of the Wadsworths, flock to our cities to seek situations at the counter of the retailer, or places at the desk of the counting-house; throng into the schools of medicine or divinity; or embark in the study of legal science. In these lotteries, that one chance in the hundred turns out a prize, in the acquisition of mercantile wealth, the enjoyment of high professional standing, the consciousness of spiritual usefulness, or the attainment of political eminence, is more than the average amount of success. Yet the glitter of the few prizes continues to tempt youth from the pursuits of Agriculture to the waste of their slender patrimonies, the destruction of their health, or the ruin of their

character and morals. JAMES WADSWORTH's ambition was more wisely directed. He did not see in his superior education the means of escaping from the pursuits of his forefathers, as if rural toil were disgraceful to the man of intelligence, but rather the instrument by which intellect and mental energy might be substituted for rustic manipulation. At that moment, the adoption of the Federal Constitution promised a Government of sufficient strength to maintain supremacy over the Indian tribes bordering upon the settlements of more ancient date, and large tracts of land hitherto held as Indian hunting grounds lay open to purchase under unquestionable titles, derived from cessions by the aborigines to the States within whose chartered limits they lay. Massachusetts and New-York had compromised their claims to the country west of the Seneca Lake; the former acquiring the right of soil, the latter that of jurisdiction; and Massachusetts, in a happy hour for the prosperity of New-York, had sold her wide but apparently valueless estate to the copartnership long conspicuous on the maps of the State of New-York under the name of Phelps and Gorham. This firm, buying at a price which, estimated by the acre at the present day, would be called nominal, contracted from the vast extent of the tract to which they had acquired a title, engagements large for the time, and both for the purpose of diminishing the amount at stake, and realizing early profits, sought to embark others in the speculation as purchasers from them. Among these was Col. WADSWORTH of Hartford, Conn., who from his wealth, and public services in the war of the Revolution, was looked up to by those of his name as their chief. The young Wadsworths, while they were unable to count kin with him, were acknowledged as the descendants of a common ancestor, and he, with the patriarchal feeling which has now become almost obliterated, was willing to extend his patronage to those who bore the same patronymic as himself. To James and his brother William he gave not only sound advice, but what proved to be the most useful aid. He proposed to them that they should take an interest in his remote and almost inaccessible estate, by purchasing a part and becoming his agents for the management of the remainder. It has rarely happened that young men of intelligence, education and sure, although limited capital, have been induced to make such obvious sacrifices for the attainment of a certainly distant, and possibly unattainable benefit. What difficulties beset and long attended them will be understood from our narrative.

The patrimonial property of the two Wadsworths was worth some $12,000 or $15,000. It consisted in lands in the township of Durham, Ct. for which there was but little demand, and served rather as the basis of credit than as a moneyed capital. Their purchase was situated in what are now known as the townships of Geneseo and Avon, on the eastern bank of the Genesee River. In the year 1790, when their enterprising journey commenced, the Little Falls of the Mohawk formed the extreme limit of continuous cultivation in the State of New-York. Small clearings were beginning to appear on the German Flats and at Cosby's Manor. The Indian trade enabled a couple of white families to earn a scanty support at each of the two places where Utica and Geneva now stand, and Canandaigua was the seat of the land office of Phelps and Gorham. With these exceptions the whole region was a wilderness, rendered more dreary by the necessary ravages of Sullivan's army, and more dangerous by the rancor which those ravages had excited in the breasts of the warriors of the Five Nations. This rancor was kept up by the promptings of traders issuing from the fortress of Niagara, over which the British flag still floated, and had for its only

soothers the magnanimity of the chiefs who disdained to feel resentment for the woes of open war, and the fears which the inferior warriors entertained of the prowess of the *Long-Knives*. To encounter the perils of this position, and perform the labor of bringing their land into cultivation, the brothers hired a small band of hardy axmen in Connecticut, purchased provisions to maintain them until the first crops should ripen, and provided agricultural implements sufficient for their proposed farm. The whole party, with its heavy incumbrances, ascended the Hudson to Albany, then often the voyage of a week; made the long portage through the pines to Schenectady; embarked in bateaux upon the Mohawk, not yet improved even by the partial operations of the Western Land and Navigation Company; and followed its tortuous course until they reached the limit of continuous settlement. Here cattle were purchased to serve as the foundation of a future stock and for temporary support, and the party was divided into two bands. James continued the laborious task of threading nameless streams, encumbered by wood-drifts and running in shallow channels, while William undertook the still more difficult duty of driving the stock through the pathless forest. Finally the party was again united upon a small savannah on the bank of the Genesee, a spot which, hardly altered in appearance, is now overlooked by a flourishing town and mansions which, if unpretending, unite in the highest degree the refinements and elegances of civilization. Here the bold and gallant bearing of WILLIAM WADSWORTH, united, or we may even say directed by the sagacity, moral courage and strict justice of JAMES, won upon the neighboring chiefs to such a degree as to have made them the instruments by which the enterprise was preserved from almost immediate ruin. A house having been built by the aid of no other implement but the ax, crops were planted and the cattle turned to graze in the rich savannah. The virgin forest which then encumbered much the greater part of the selected portion of the Genesee Flats, was vigorously attacked, and the mighty trees yielded to the Yankee ax. Classic superstition in the events which followed, would have seen the Dryads uniting to avenge the destruction of their desecrated groves; for, with the autumn came the enervating and unmanning attacks of the ague. This, to natives of a country where it was unknown, presented such terrors that the hired men broke the conditions of their engagement and hurried as they best could toward the older settlements, leaving the two brothers almost if not quite alone in their log-built cabin. In this position even mere passiveness on the part of their neighbor Big-Tree, the chief of the Indian village on the Genesee, immediately opposite to the settlement of the Wadsworths, might have compelled them to follow their servants; but they now obtained from him ready and efficient aid—an aid not given, however, without satisfactory equivalent, and far more than repaid to his race in their waning fortunes.

With the opening of a new spring, a fresh supply of white laborers was obtained, and whether they were acclimatized or had been familiarized to the endemic disease, no farther interruption occurred in the progress of the clearing.

The Indian corn of their first crop was beaten into meal in a mortar fashioned by the ax from the stump of a gigantic oak, and the pestle was swung as on a spring, from a long and pliant pole. Gradually in the progress of the clearing, the falls of a little stream were reached, where a saw and grist mill, erected by the Wadsworths, formed the nucleus of the now flourishing village of Geneseo.

The gradual extension and successful prosecution of the enterprise, together with the duties of the land agency, led to a division of the labors of the two

brothers. Upon William, more robust in frame and more valid in constitution, devolved the direction of their own agricultural labors, and of necessity much of the direction of the business of the land office; while to the lot of James fell the traveling necessary to the successful prosecution of their own business, and for keeping up their connections with the landholders whose concerns were committed to them. To judge of the extent of the labor involved in the first of the branches committed to James, it may be stated that the first plan which presented itself for rendering available the exuberant fertility of their meadows, was the purchase, fattening and sale of cattle. This was the only form in which a surplus agricultural product could be made to yield a remunerative price in the distant and secluded valley in which the Wadsworths had placed themselves. The cattle which formed the subject of this trade were purchased young and lean in the Eastern States, driven to Geneseo, and when fit for market were either again driven to the remote markets of New-York and Philadelphia, or to Hornellsville, on the Tioga branch of the Susquehannah, whence they were transported in the rude embarkations called arks to Baltimore.

The West, although then limited by the Niagara River, had not begun to exercise that fascination which it now does. Men residing on comfortable farms, and delicate females, were not willing to abandon the homes of their youth to try the perils and labors of the wilderness. Purchasers for lands and tenants of farms were, in consequence, to be sought for at the places of their birth, instead of swarming at each returning spring from the native hive. It therefore became one of the tasks assumed by James Wadsworth to travel on horseback through the regions most abounding in population, and endeavor to make sale of the wild lands of his agency, or by the tender of liberal terms acquire tenants to occupy lands already brought into cultivation.

The parties most desirous to remove were those in the least affluent circumstances. Persons, who by the continual division of lands among successive generations, had reached that stage in which the amount of soil held by them was inadequate for their support, and who in a population wholly agricultural could find no room for occupation as laborers. With these the great difficulty to be overcome was to find purchasers for their worn-out and impoverished possessions. To meet this case, lands in the Eastern States were taken in payment for those of the Genesee Valley, or for the outfit necessary to remove families to occupy farms as tenants. The lands thus acquired were in their turn to be sold, or made productive of rent. In the records of operations of this description, it appears that there were instances in which six acres of the virgin soil of the West were given in exchange for a single acre of little better than rock in New-England; and it is now certain that, after an interval of fifty years, the relative value of the two portions is reversed. Thus, while the objects of the speculators in the Genesee Valley were completely answered on the one hand, on the other the parties who purchased from them have multiplied their original capital thirty-six fold.

The success which attended the early operations of the Wadsworths in drawing settlers to their own lands, and those of which they were the agents, attracted the attention of other parties holding property of the same description. It was obvious that it was to the personal address and business talent of James that this success was in a great degree to be attributed. He was in consequence, in the year 1796, requested to undertake a mission to England for the purpose of interesting the capitalists of that country in the lands of the Western District of

New-York. Direct advantage was to be derived by the proprietors of large tracts by the sale at a profit of what they held as a speculation; but more important, although indirect, benefit was to be attained by the whole region, in a manner that will be presently seen.

The circumstances of this mission, and the high character of the parties for whom he was to act, gave him introduction and brought him into contact with persons whose position in European society was best suited to enlarge the views, improve the mind, and polish the manners of a young man of so apt a disposition. While, therefore, he was successful in accomplishing the objects of his mission, he derived no small amount of personal advantage and gratification from his foreign tour. His manner and address must have been from his youth prepossessing, but he would have differed from all his Connecticut brethren had he been free from provincial peculiarities, which, whether the growth of the Ouse, the Trent, the Severn, or the Housatonic—nay, even if generated within the sound of Bow-bell, taint with vulgarity manners in other respects the most gentlemanly. In the subsequent years of Mr. Wadsworth's life, there was no trace of such a defect; and so far as language is concerned, he might have undergone the most severe and surest of tests, that of being able to pass through every region in which the English language is spoken, without exciting an inquiry as to the place of his birth.

The results of Mr. Wadsworth's mission to Europe had effects on the prosperity of the region in which he had fixed his residence little appreciated at the time, and now in a great degree forgotten. It is the fashion of the day to advocate the infinitesimal division of the national domain, and to consider purchases of large contiguous tracts as a public evil. The experience of the State of New-York was in direct opposition to these narrow views. The large estates would have been destined to remain an unproductive wilderness in the hands of their owners, had they not been opened to the view of persons seeking for places of settlement. Hence roads were laid out and worked, bridges built, aids given to the erection of schools and churches, and under the influence of this forced growth, the region between Seneca Lake and the sources of waters running to Lake Erie outstripped in its improvement the more accessible and equally fertile Military Tract, which the gratitude of the State of New-York had divided in small lots among its Revolutionary soldiers. The accumulation of the surplus products of the former region created a necessity for the means of transport, and its population, animated by the ardor of a youthful vigor and directed by minds of no little power, formed the popular force which Clinton wielded with such skill, when the construction of the Erie Canal was decreed, in opposition to the vote of the City of New-York and of the River Counties.

It has been asserted, and the assertion is supported by evidence almost intrinsic, that for thirty years from the time the Pulteney family acquired the estate known by their name, no remittance had been made to them in England, either as income, or as a return for the original investment and the large additional capital expended in opening communications. The condition of the Wadsworth estate was not different, with the exception that the funds destined by the foreign proprietors to the support of agents, served to defray the unostentatious but liberal hospitalities of the American landholders. When the time at length arrived at which the profits of the long struggle were to be reaped, the difference between the foreign and resident owner became apparent. The former had indeed fairly earned them by the employment of his capital, and deserved them for the benefits a

regard for his own interest had induced him to confer. Here, however, his influence ceased. The remittance of his capital and accumulated profits created a vent for the products of the very fields of which it was the price, to an equal amount, and the account was balanced without farther profit or loss to either hand. The Wadsworths, on the other hand, adopted as the principle of their action, that their profits should be reïnvested upon the spot, and in this way gave a second impulse to the industry of their neighborhood. Thus, while a part of the original purchase was actually disposed of in fee, a larger quantity of land than was sold was added to the estate. Of this, the death of Gen. William Wadsworth without children left the subject of our Memoir the sole proprietor.

Mr. Wadsworth was probably the only instance, since the breaking out of the Revolutionary contest, of the investment of a fortune accumulated by the industry of a whole life, in agricultural property. In most, if not all, of the other cases in which fortune has been derived from the purchase and sale of land, it has been changed in its investment from the tillable soil, to city lots or moneyed securities. It would be difficult to form an estimate of the enormous magnitude of the amount which has thus been drawn, in the western part of the State of New-York alone, from the support of Agriculture. Flourishing as that region is, imagination can hardly conceive how much more flourishing it might have been had the whole of the profit derived from the rise in the value of its wild lands been reïnvested upon the spot.

The estate of the Wadsworths, reserved in compliance with the principle originally adopted, that their capital should not be withdrawn from the region in which it was accumulated, was partly held in their own hands, partly leased, and partly cultivated "upon shares." The Home Farm, cultivated under their own immediate direction, comprises upward of two thousand acres, of which more than half is a rich alluvial *flat* of the Genesee River.—This portion was for many years the only part from which any profit was derived; and to the raising and feeding of cattle, of which mention has already been made, was added the culture of hemp, for which crop the inexhaustible fertility of the soil was admirably adapted. The hilly land which borders the alluvial soil on the east was, in its original state, what is styled an "oak opening," namely, a swelling surface studded with gigantic black oak trees, and free from undergrowth. The latter had been kept down by the fires which the Indians were accustomed to light in it, for the purpose of rendering it a profitable hunting ground. Where this custom is put a stop to, young trees and bushes speedily made their appearance, and unless cultivation of some description be applied, the whole soon becomes a tangled thicket. This description of land was at first considered to be of little value. When, however, the state of the Spanish peninsula led to the importation of considerable flocks of Merino sheep, the Wadsworths were speedily among the largest proprietors of animals of that species, which were fed upon the uplands; and the high price which the fleeces long bore upon the seaboard, sufficed to defray the cost of the tedious transportation to the navigable waters of the Hudson. Experience has shown that the oak openings, so much underrated at first, are better fitted for the growth of wheat than any other soils. But it is not surprising that this valuable property should have so tardily developed as to be considered by some a fortuitous discovery. It was not until the Erie Canal was opened, that wheat would yield a return of the bare freight from the Genesee River to a market, and hence there was no inducement to cultivate more of that grain than could be consumed on

the spot. In spite, however, of the admirable adaptation of the upland of the Home Farm to the production of wheat, grazing was to the very last the principal object. This application to a purpose which might at first sight appear the least profitable was dictated by the prudence of Mr. Wadsworth, who was aware that it was impossible by means of hired labor to cultivate grain on as good terms as could be done by those who held their own plows. For similar reasons root crops never formed a part of his system of husbandry.

The leasehold lands were at first granted to the settlers for the term of two joint lives and the survivor, the parties named being usually the settler and his wife. By mutual agreement these were subsequently changed to leases for a term of years, and this became, from that time, the form of the original contract. These farms usually comprised each about one hundred acres. The rent was in most cases fixed by a money standard, but it was many years before money began to pass from the tenant to the landlord. The convenience of the former demanded that it should be received in the product of the farm, or worked out in labor. It was not until the War of 1812 caused the expenditure of government funds in the Western District of New-York that money made its appearance, and this was in the form of a partially depreciated paper. The establishment of banks speedily followed, and although their charters were doled out as the rewards of partisan politics, or were directly purchased by political corruption, they were, in spite of the taint on their origin, the instruments of no little benefit to the poor landholders and the tenants of small farms.

Larger farms than those of 100 acres were leased for shorter terms, on the conditions of the payment of a share, usually one-third, of the grain crops, and a stipulated sum for the portions not under the plow. The rotation of the crops on property of this description, and the manner of cultivation, required much individual attention from the proprietor, and, although more profitable to him than lands leased in the other manner, were far more troublesome to manage.

In the collection of his rents, Mr. Wadsworth looked for the same punctuality and good faith from his tenants that he was accustomed to exhibit in his own dealings with others. Hence, with the improvident or careless, he gained the reputation of severity. That this was unmerited, none acquainted with his active benevolence and equanimity of temper can doubt. The knowledge on the part of his tenants of the steadiness of his course in this respect was, to the industrious, rather a benefit than an injury, for it compelled them to a close calculation of their profits; and the requirement of punctuality in payment prevented the careless from accumulating debts beyond their ability to discharge.

Many of the farms held for long terms of years reverted to Mr. Wadsworth before his death; and, while the land itself was generally in good order, the tenants had, for the most part, made such profit from the occupation as to be in comfortable circumstances. From inquiries and comparisons made upon the spot it was inferred that the tenants of his estate were upon the whole more successful in their pursuits. enjoyed a greater share of comfort, and laid by larger profits than those who purchased upon credit lands of equal quality in the neighborhood.

Mr. Wadsworth married, in the year 1804, Naomi Wolcott, of East Windsor, Connecticut. By this marriage he had several children, three of whom survive him. In his wife he had the good fortune to meet with tastes and disposition congenial to his own; and those who had the good fortune to enjoy her acquaintance still speak in the highest terms of her worth. Under her inspection and management, under circumstances that all who have attempted housekeeping on

a liberal scale in new settlements will know to be those of difficulty, the mansion at Geneseo became a model of well-ordered, generous, and yet unostentatious hospitality.

The loss of his wife, of his brother, and of a daughter who had just reached the age of womanhood, and been fortunately married, shed a gloom over some of his later years; but he still took pleasure in collecting a circle of select friends at his residence during the season at which Geneseo was readily accessible. Intelligent, well informed, and fond of intellectual converse, he possessed in a high degree the happy talent of drawing out his guests, and bringing their several talents and acquirements into requisition for their mutual entertainment. The visitors of his house, hence, never felt the pains of *ennui;* and while he laid no restriction upon their engaging in games of chance or skill, the customary resource of vacant minds in country residences, it is said that no desire for amusements of this description was felt by his occasional inmates for the last twenty years of his life.

The success which attended Mr. Wadsworth's career was due in a great degree to his regularity and skill as a man of business. We have seen how actively he was employed for many years in bringing his property into a productive state. In his later years he, without noise or apparent effort, directed the cultivation of the large farm retained in his own hands, superintended the numerous tracts let upon shares, and gave due attention to his interests in the leases for long terms of years, while he at the same time fulfilled with punctilious exactitude the duties of agent for several considerable estates. All this was effected with so much ease and method, that to his visitors he had the air of being entirely at leisure.

Habits of this description gave him, during the winter and times unfavorable for traveling, the command of many hours in each day. These were employed by him in reading and literary correspondence. His favorite study was political economy, but he did not fail to keep himself informed of the progress of all the physical sciences. He, in fact, furnished a singular instance of a person who had closed his elementary education, and entered into a life of great activity, at a period when the very names of chemistry, geology and mineralogy were yet unknown in our colleges; and had notwithstanding, and at a distance from all the usual facilities, contrived to acquire as much of them as is considered necessary as an accomplishment in our modern schemes of instruction.

The interest he took in these pursuits was enhanced by the clear view which he took of their power of being usefully applied to Agriculture; and while, upon his own lands, the necessity of renovating the soil appeared in a perspective too remote to affect his descendants for several generations, he notwithstanding felt a generous impulse to bring the aid of science to those less fortunately situated. Selected tracts on scientific subjects in general, and others specially devoted to the application of science to Agriculture, were for this purpose printed at his expense for gratuitous distribution. In many cases the fact of his intervention in these publications remained unknown, except to himself and the editors. Other articles of less extent he caused to be inserted at his expense, not only in agricultural periodicals, but also in the newspapers circulating among the farmers of the State.

The utility of these efforts was evidently limited by the want of education among the persons for whose benefit they were intended; and a knowledge of this fact led to the direction of his attention to the extension and improvemen-

of the school system of the State. The subject of the education of the body of the people thus became the absorbing interest of his later years. In his reflections on this subject he formed the conclusion that the important point was to form a taste for reading, and provide suitable books; and it was among his projects to give to subjects of instruction the popular form of the newspaper. To carry this into effect would have required more time than he could have personally devoted to it, and he found no one equally enthusiastic in the cause with himself. Failing in this, he suggested the plan of the school district libraries; and, when this had received the sanction of the State Legislature, his influence was exerted in procuring the printing of an annual series of suitable works, and his taste consulted in the choice of a competent editor. To insure the publication of the series thus selected, he became responsible for the sums directed by the law to be raised in school districts in his own neighborhood—of which in most cases a part, and in some the whole, became an actual contribution to the cause of education from his private purse. He had thus the consciousness of bestowing a charity of the best description, and in the most unostentatious manner; for, so far as the publishers or the public could learn, the funds appeared to be raised in the usual manner, by subscription or assessment among the inhabitants of the district.

His influence was more directly and openly exerted in urging the enactment of a law by which the Controller of the State of New-York was authorized to purchase and send to every school district in the State a copy of Hall's "Lectures on Teaching." Finally, aware of the want of text-books specially adapted to the use of the common schools, he placed in trust a sum sufficient to call the best talents into competition, to be paid to the authors of the best elementary treatises on certain specified subjects. After much delay on the part of the very distinguished gentlemen who were invested with the power of awarding the prize, the money was paid to the successful candidates; but, by this time, the want he had desired to supply had been satisfied by individual enterprise, and the successful treatises have not been published. In the selection of his umpires, Mr. Wadsworth had regard to a character beyond suspicion of improper influence, and intelligence of the highest order. It was not his fault that they undertook a duty which their important avocations as statesmen prevented them from performing for a long time, and then, it is believed, by deputy. Nor can we blame him if the works exhibited for competition were so inferior in quality, or the judgment in awarding the prizes so imperfect that the authors of the preferred treatises have not yet been able to find a publisher bold enough to risk his capital on the faith of the award.

His plan had embraced the publication at his own cost of the successful compositions. The necessity of such publication having been done away with by private enterprise, the fund he had set apart for this purpose was applied, by his directions, to the publication of a work drawn up by Professor Nott and Mr. Emerson, entitled "The School and the Schoolmaster."

With views of the same description, he encouraged the access of lecturers on subjects of utility to his neighborhood, and the sums with which he eked out their remuneration from their auditors reached, in the aggregate, a large amount.

His position as a large landholder, and the agent of large estates, led to continual calls upon him to contribute to the establishment of places of public worship, to the building of school-houses, and to enterprises of similar character. In his contributions to such objects, no complaint can be made of his not being, in

the aggregate, even more bountiful than was demanded by his position. But he chose to be governed by his own views of the useful to the bodies as well as the souls of his tenants and poorer neighbors, and was in consequence more disposed to be liberal to schools than to churches. He, in fact, was occasionally heard to complain that the clergy of his neighborhood were more solicitous to enhance their own importance in the assemblies or convocations of their sects, than to advance the intelligence, whether of spiritual or temporal matters, in their flocks; and, in no little sorrow, pointed out to his guests, as an illustration, four spires surmounting as many comfortable churches, at the four corners of a cross-road in view from his house, which overhung a school edifice that a good farmer would not have considered an adequate shelter for his swine.

Educated in the strict tenets of Connecticut Calvinism, the duty of aiding his tenantry in building and supporting places of worship brought him into contact with clergy of all denominations, and he became entirely free from any sectarian bias. Those who cannot conceive religion to exist without bigotry, and heard his remarks on the apathy and even the opposition exhibited by some of his clerical neighbors to his efforts to improve the schools, have not failed to cast aspersions on his faith. No aspersion can possibly be founded on less tenable grounds. It was rarely that he entered upon religious topics. He felt them to be too sacred for the discussion of mixed companies; and, while he neither invited nor repressed it among his guests, seldom took a share himself. But there are those who, in more close relations of intimacy, have become aware that the orthodox impressions of his youth were not obliterated, but only rendered more catholic in their tendency. Religious forms and observances were treated by him with marked respect, and he was punctual in his attendance upon the stated Sunday service of the Presbyterian Church during the early years of his residence at Geneseo, and toward the close of his life upon those of the Episcopal Church.

In his efforts for the promotion of education and the dissemination of knowledge among the people of the State, Mr. Wadsworth studiously avoided publicity. He appears to have shrunk with instinctive modesty from any mention of his name as a public benefactor. Many of the facts which have just been stated have been reached with difficulty, and it may be inferred that they are far from being a complete list of the benefits he conferred upon his fellow-men.

The same sensitiveness seems to have prevented him from seeking political distinction, or taking an active share in party struggles. So long as the Federal party continued to have an existence. he gave it his vote; and his example, unattended by any attempt to exert a direct influence, had, no doubt, its due influence on his neighbors. In the frequent divisions and nice shades of distinction that arose in the triumphant Republican party, he took no part, with the exception that all his views were strictly conservative. He gave, to the last, the best possible proof of his reliance upon the sufficiency of our democratic institutions to insure the enjoyment of life, personal liberty, and the security of property, by continuing the investment of his estate in land, although there were times at which he might have realized vast sums by its sale.

Thus exempt from the bitterness that occasionally grows out of party feeling, he enjoyed the esteem and personal intimacy of those of all parties who, by the extent of their views, rose from the character of mere partisan leaders to that of statesmen.

The correspondence of Mr. Wadsworth was necessarily voluminous, from the amount of the interests which he either possessed or represented. But, in the

later years of his life, it took a more extended form, and to the details of mere business he added a series of communications on subjects of literature and science, in particular relation to his darling scheme of extending and improving the means of popular education. His letters are marked with the precision of the man of business and the pure diction of the scholar, and it is said that they were occasionally extended into well digested essays on the subjects he had so much at heart. Of these, but one has seen the light in a printed form. This was a letter on the subject of civilizing the Indians, which appeared in the newspapers of the day. The publication, however, took place without his knowledge, and, had he been consulted, he would probably have refused his assent. The distinguished statesman to whom it was addressed was, no doubt, of opinion that he had no right to lock up so valuable a communication from the public, on whom it was well calculated to produce a powerful impression, and that favorable to the interests of a race which, unless some powerful agency intervene, seems destined to destruction.

We have already spoken, in part, of the manner in which his home farm was conducted. Devoting it chiefly to grazing, the sources from which his stock was derived varied with the progress of settlement. Drawn at first from New-England, the supplies of young neat-cattle were finally obtained from Ohio, and States still farther west. This, of course, did not preclude the breeding of stock upon his own farm; and here he manifested a sense of practical utility, by which it would have been well had others, who have devoted large sums to the obtaining of foreign breeds, been influenced. The breed of his native valley of the Connecticut was that which he preferred, and upon his rich pastures it has attained an excellence which may be envied by those who have resorted to foreign races. It so happens that the stock of the earlier settlers of New-England was, from the fact of all the vessels taking their final departure from the south-western ports of the mother country, derived from the very county, Devonshire, where the best of the improved breeds of England have their origin. This has been thoroughly acclimatized, and although it may have degenerated in barren soils, and for want of care, the valley of the Connecticut still possesses it, rather improved than fallen from its original good qualities.

His attention to fine-wooled sheep was governed by similar practical and judicious views. He had no share in the mania, under the influence of which Merino rams were sought for at the price of thousands of dollars; but, no sooner did the price fall to reasonable limits, than he became the possessor of the largest flock in the State; and he did not condemn it to the butcher when the unreasonable expectations of sudden and enormous profits, which others entertained, were proved to be fallacious.

Besides neat-cattle and sheep, the breeding of mules formed for several years an object of his attention.

It might have been expected that with such extensive concerns to manage as a land agent and landlord, not to mention the great extent of his own farm, cultivation on a small scale could have created but little interest in his breast. But this was not so, for he delighted in directing the culture of his garden, and in propagating the finest descriptions of fruit adapted to the climate, although he eschewed the costly luxury of the forcing-house.

One peculiarity marks and distinguishes his possessions not only from those of small proprietors, but from those of the greater part of large landholders. This is, the manner in which they are studded with trees, isolated and in clumps, or

surrounded and divided by belts. In this respect their aspect is that of the most admired portions of England, with this difference in their favor—that the trees are not planted by the hand of man, but continue to exhibit the grandeur of form and dimensions which they had acquired in the primeval forest. In England, according to his own statement, he learned to love trees, ere it was too late to prevent their entire destruction on his own domains by the unsparing ax of the pioneer of cultivation. He moreover was taught that a time is finally reached in the progress of population when timber is of more value than any other product, even of the most fertile arable soils. With this love of the beauty of trees as a mere object of sight, and sense of their prospective value, he willingly encountered the prejudice which represents them as injuring the meadows, whether for the scythe or for pasture, by their shade. To his surprise he found no diminution in the product of hay in his sheltered savannah, while to his stock, in the summer of our climate, the umbrageous shelter proved of incalculable benefit. More particularly his rich alluvial land, extended in the form of a peninsula from a narrow isthmus, has been protected from encroachment and from the wash of the river by the native belt of wood which surrounds it.

Few as are the events which mark epochs in the quiet and successfully industrious life of Mr. Wadsworth, it would be possible to dilate at great length upon these and other points in which his example and experience might be of great value to the proprietor and cultivator of land. We have, however, already exceeded the limits to which we are confined, and must hasten to a conclusion.

In 1843, Mr. Wadsworth became sensible of a decline in his health. His disorder soon exhibited symptoms which demonstrated its probable incurable nature. The certainty of his dissolution at no distant day became apparent to him, and although he yielded to the wishes of his friends and children, by trying a change of scene and air, he was himself aware how fruitless must be the attempt. The slow and gradual approach of death he awaited with equanimity and fortitude, and although he no longer manifested his accustomed interest in his favorite active pursuits, his intercourse with his friends was not devoid of its usual cheerfulness, which was damped rather by their anxieties than by his own. Returning to his residence at Geneseo, he there died on the 7th June, 1844.

CHEVIOT SHEEP,

AND OTHER DOMESTIC ANIMALS, AT MARSHFIELD.

To JOHN S. SKINNER, Editor of The Farmers' Library:

SPEAKING of sheep in your August No. you say, "there are some strong reasons to believe that, for our mountain ranges, the Cheviot sheep of Scotland would be most profitable." I agree with your Delaware friend in saying the land in Western Virginia, which can be purchased so very cheap, is the very country for sheep. But you are wrong in saying the pure Cheviots have not been imported. On a late visit to Marshfield, we found that great lover of his country, DANIEL WEBSTER, had imported a flock of 20 pure Cheviots, and they were doing very well, as were also some South-Downs. We saw also, at his farm, Ayrshires bred from his imported stock, and certainly they have not deteriorated under the judicious management at Marshfield. We also saw his fine breed of "Macky" pigs, and handsomer pigs are not to be found in the length or breadth of our land. The sire of his stock is now 12 years old, and a most respectable pig he is. He has been sent for to almost every county in the good Bay State, and his reputation is so good and well known that he has even visited New-Hampshire, where one finds the marks of his having been, by the beautiful white progeny that have followed his steps. In truth, Mr. Webster deserves high commendation for his praiseworthy efforts to benefit the agricultural interest of his country. C.

WHEAT—ITS DISEASES, &c. &c.

MR. EDITOR: I feel impelled by a sense of duty to respond to the call you have made on me to communicate an article on the subject of wheat; but let me say to you candidly, that you have placed too high an estimate on my ability to discharge such a duty. In truth, I had meditated throwing out something to elicit information from other sources, as to what is best for wheat growers to do in this part of the country, where wheat is the staple. Clouds and darkness rest upon our vocation; the cultivation of wheat has become a most uncertain thing; the disasters of the present year will not soon be forgotten. We possess a soil, as you have stated, heretofore celebrated for producing "White Wheat;" but the failure of all the smooth varieties is deplorable—and there are many of them cultivated here. So far as my inquiries have extended, there cannot be more than a third of a crop, and that, too, of very inferior quality. Fortunately, many have seeded a portion of Mediterranean or German wheat, and some few have grown an entire crop; but there are numbers who have placed their reliance exclusively on white wheats, possessing soils particularly adapted to their growth: among these your correspondent happens to be a sufferer. The Mediterranean has been exempt from the disasters which assailed other varieties, and will make a fair crop, though not a great crop. It has also improved much in quality since its introduction here, having become whiter and the rind thinner. It is a remarkable fact that this wheat will bear early seeding and escape the ravages of the fly, or, if assailed, possesses some recuperative energy, to make a crop. I have always had a prejudice against bearded wheat, but have almost made up my mind to try the Mediterranean in part, for my next crop. Facts are wanted, and the first question for consideration is—What is the best variety of wheat to grow when the seasons are so frequently unfavorable for the production of a fair crop. Unhappily for the community of farmers, much humbug is practiced about seed, and many puffs are put forth about this or that new variety, claiming an exemption from the ills to which the plant is subject. That excellent man, old John Singleton, told me, nearly thirty years ago, that he once collected and seeded twelve varieties of wheat the same season; that among the number, one had a solid stalk, of which he expected much, but the whole twelve were attacked with fly, and he held the doctrine that none was exempt.

This conversation was the result of an inquiry addressed to him on my part, whether he intended to procure any of *this new variety of wheat*, which claimed exemption from the ravages of the fly? No sir; you young men may try it; I want faith in such reports. It may be here remarked, that he was, or rather had been, a great experimental farmer. This is an apt illustration of some of the humbugs perpetrated in these our days. Perhaps the wheat alluded to was the "Lawler," which had its day, and afterward reäppeared under a new name—not as old books do sometimes, "*multo emendatior et correctior*"—but quite a new variety; and, as you well know, Mr. Editor, there is much in a name, it was christened "Talavera," a place rendered illustrious as the theatre of a great battle. But does any body hear of it now, as possessing claims to preëminence, under either name?

All the varieties of wheat are proper subjects for discussion, and many farmers, old as well as young, may be saved much mortification and loss. The first great desideratum is, early maturity, thereby diminishing the chances of disaster. There are many varieties of smooth white wheat, possessing the qualifications for making the best family flour, and also of being very productive, *when the season suits;* but they are too late. The old Washington or Virginia White, for many, many years almost exclusively grown on the salt water lands of the Eastern Shore, gave a character to our country for producing the best white wheat. The Point lands having a fine friable mould, intermixed with shells, and whose substratum is a rich, unctuous yellow clay, (about the color of an old-fashioned gold watch,) produced this wheat in its greatest perfection; and al-

though the stiff white-oak lands in the immediate vicinity—within the same inclosure—would produce a fine crop, yet, nevertheless, it was essential constantly to recur to the former for seed, or depreciation would be the inevitable result. For productiveness, quality and quantity of flour, it has never been surpassed, if equaled; but it has disappeared from among us; it had to be abandoned ultimately, to the regret of many, on account of the great uncertainty of making a crop, its great liability to rust, and consequent deterioration of grain. This wheat never succeeded well except in a saline atmosphere, on farms bordering on salt water; and I apprehend that the successful planter and farmer at "Doden" is mistaken in supposing that the beautiful white wheat which he grows, and always commanding the top of the market, to be the old Virginia White.

The old rare-ripe, a beautiful white wheat, fine for flour, the earliest variety then known, and perhaps still so, has been abandoned years ago--not, however, for the causes last assigned. It was too uncertain, the straw very short, and most difficult to bind on account of its weakness; and finally, its great liability to smut, when the means of prevention or modification were neither well understood nor practiced.

The Pennsylvania white chaff bearded, grown here for some years, had a beautiful white grain, but was never known, under any circumstances, to make a maximum crop: it has passed away like a "summer's dream."

The New-York improved White Flint, to which the name of "Harmon" has given celebrity, possesses high qualifications, but has also entailed on it the defect of being too late.

The "Polish."—I procured for seed some of the first crop grown in this country; and that, too, at an unusually high figure. It was cultivated successfully by me for several years, but had to yield to another: this may be classed with the preceding, having similar qualifications and defects.

The "Rock."—A learned Judge of the Court of Appeals and a good farmer, now no more, told me several years ago, that this was a humbug. I have never seen a field of it growing; it has, however, been cultivated with some success in one section of our county, and much esteemed by a few. Whether its great failure this disastrous year will cause its abandonment, remains to be seen. No variety could be less suited to such a season.

The "Etrurian," introduced by the gallant old Com. Stewart, the White Kloss blue stem, the "Hershey," are now being grown, and all have the merit of being early smooth varieties. Perhaps the first named is the earliest. I speak of this from report only, and that, too, limited. The grain is represented to be beautifully white; that it escaped the rust, but was excessively injured *by fly*. I have seen printed statements claiming almost total exemption from fly for this wheat—in short, fly-proof. I have it in contemplation to try some of it for my next crop. The blue stem White Kloss was ushered in the past season, as the "*ne plus ultra*." I procured some for seed, and it was placed side by side with the Hershey, and under equal circumstances: they ripened about the same time; but the Hessian and the rust contended for the empire over both, and seemed to hold equal dominion; which suffered most 'twas difficult to determine. It may be added, that scab and smut brought up the rear, to aid in the work of destruction. I have heard of fair crops on several farms being made of both these varieties.

An enterprising young farmer in my neighborhood sowed two bushels of each of four varieties, side by side, to test their merits—the "Etrurian," "White Kloss," China, or Hardware, and a large red bearded, obtained from New-York. He stated to me that the White Kloss beat them all considerably. The Etrurian was literally demolished by fly. The China produced very inferior grain, and less in quantity. So far as this season is concerned, the testimonies are strongest in behalf of the Kloss wheat over other smooth varieties. Such, however, has been the result of my inquiries.

I introduced the Hershey here some five or six years ago, and grew it with much success for several crops; in fact, with more success than any other wheat; but it is passing away. I have come to the conclusion, Mr. Editor, that frequent change of seed is necessary, and that no variety can be successfully cultivated on the same farm beyond a few years. Almost all the above named have been grown by me, and every change made has generally proved advantageous.

But to return to the Mediterranean: this seems to be an exception; it has been grown by a few for ten or twelve years, and has evidently improved in quality. For several years numbers have seeded it because of its being more certain to make a crop, under all circumstances. It is remarkable in another respect, its exemption from rust when other wheat is most seriously injured. I know of one case where the Hershey was actually cut before the Mediterranean, because the former had become rusty, and the latter was entirely free. This wheat will doubtless be very generally seeded here. But what is to be done for the best white family flour? Our Baltimore millers have become extremely fastidious on this point. The Hershey, which makes as good bread as any wheat in our country, was decried the past season because, forsooth, the loaf had not the snowy whiteness of the old Virginia or White Flint, but has a rich cream color. The best reply to this is afforded in the appropriate language of the Mantuan bard—"*Nimium ne crede colori.*"

But of the Diseases of Wheat—How is that most formidable enemy, the Hessian, to be combated? That the eggs of the parent fly are deposited on the upper surface of the blade, and very low down, too, where the blades begin to branch, cannot admit of a doubt. And if, in *that stage*, they could be eaten off by sheep and young cattle, it would cause their destruction. This remedy is suggested in the "ponderous work" to which you allude, and by very high authority, as an argument for early seeding; but it is a nice point to hit. But what is the next stage of this destroyer of the hopes of the farmer? If the weather be warm, as is the case when you seed early, the egg is soon hatched and a very minute worm is the product, which descends within the plant and places itself below the surface of the earth, and beyond the reach of the teeth of animals intended to graze it off. Any man who wishes to examine the condition of the insect must take out his knife and scoop out or cut round the plant below the surface, and he will then find the chrysalis. In the subsequent stages of the wheat plant, in spring, it may be found above ground, and even above the first joint, both in the chrysalis and flax-seed state. After the descent is made, perhaps, the tread of heavy beasts, or the passing over of a very heavy roller, might destroy many, the surface of the earth being at the time favorable for such an operation. All my attempts at making wheat, seeded in September, have proved failures from the depredations of the *fly*. It is proper, however, to state the fact that I have never grazed, having always had a reluctance to see stock grazing on a growing crop. But I have heard of success attending it on several occasions. The best time for seeding, in our latitude, to avoid the attacks of both fall and spring fly, may be stated from the fifth to the twentieth of October. But, if about the first of October there be a fall of rain, and a cool change supervenes, this may be regarded as the best condition of things to escape the destroyer, and the work should go on forthwith. The present year has defied all the usual precautions, even in the strongest lands; for wheat seeded from the tenth to the middle of the month was, with me, the most injured. This is not, however, usually the case.

The rust is the next most formidable enemy, and I am not certain that as much loss has been sustained during the course of my agricultural life from this cause as from fly. It would seem, however, from the statement of facts which have appeared in agricultural papers, that the application of charcoal is a preventive. So powerfully impressed am I with this belief, that it is my purpose the ensuing winter, "Deo volente," to attempt largely the conversion of pine-wood into charcoal. I have also heard from unquestionable authority of another manure, which has always proved effectual; but this must necessarily be confined to certain localities.

Mr. Editor, you have doubtless seen frequently in the tributaries of the Chesapeake Bay, the grass growing in water from two to four feet deep, in immense quantities; and the little sand-snipe and kildeers running about on its surface. Some of our farmers haul up this salt-water grass. Having previously plowed up a headland, the grass is carted thereon, and covered up with the plowed earth. It is very soon decomposed, and forms an admirable compost. It has been observed that the portions of a field dressed with this manure will be entirely free from rust, while other parts to which the contents of the farm-yard have been applied will be much diseased with this pest of the farmer. Its action in other respects is unsurpassed. This suggestion may be of some value to your Long-

Island farmers, who are so liberal in their expenditures for manure; and also in various other localities.*

The truth is, too much dependence is placed on growing wheat and corn in this section of the country. They are our staples; and the great uncertainty attending the growth of the former imperiously demands the substitution, in part, of some other agricultural product. Your suggestion, therefore, is of great value on the subject of barley, and merits especial consideration. I have no experience in growing this grain, and earnestly solicit information. Among the apprehensions that may be entertained respecting this product, can we always get a reasonable price for it? Vast quantities are consumed in England for malt liquors, but we are not a beer-drinking people. The Arabs sustain, or formerly did, their unrivaled race of horses on this grain; and it might be, perhaps, so employed in our own country.† It is stated in the Domestic Encyclopædia that "calcareous soils which have been long in cultivation, and frequently manured, will yield abundant crops of barley." Such is emphatically the condition of this wheat-growing region; whether they possess the capacity for producing barley abundantly, remains to be proved. We want light.

Of Steeps.—You are aware that I tried the "Chemical Solution," in the hope that something had been found out as an antidote to some of the ills to which the farmer is subject. A letter of inquiry was addressed to me by the vender of the article, respecting its action; and a true statement was made as to the condition of the wheat at that time. Unfortunately, an extract from this letter, which was never designed to meet the public eye, was put forth prematurely, and led some into error. It had the effect of bringing up the wheat earlier, and of producing a striking difference through the winter and spring; but, as harvest approached, the superiority was scarcely, if at all, perceptible. But the experiment resulted in one very unhappy effect—the wheat thus treated had considerable smut in it; while, in its immediate vicinity, that which had been limed and brined, had not a smut-head. Various and conflicting opinions have been published as to the mode of preventing this disease; it is a serious evil, and merits the closest attention of the farmer. I had for some years washed my seed-wheat in strong brine, and then applied lime recently slaked. It is true that, after diligent search, a little smut would occasionally be found, but it was too unimportant to merit notice. Two years ago I was tempted to depart from this course, by reading Mr. Ellsworth's Report on this subject, and other authorities. The wheat was accordingly permitted to remain in pickle through the night, and the next morning limed and seeded. It did not seem to me to germinate as well as by the former process, and was not so healthy and vigorous in its early growth. And what appeared to me conclusive of the fact was, that not liking, on two occasions, to put my wheat in soak in the evening, being apprehensive of rain the next day, and then necessarily merely washing and liming, there was an obvious superiority in the appearance of the wheat thus treated. The past season, as you are already aware, the Glauber salt was employed exclusively, and much smut was the result. Another farmer of this county had the same result from its use.

It is unpleasant to differ from great names and high authority, but there can be no impropriety in every man giving the result of his own observation and experience. I have no particular theory to establish, and am ready to adopt what-

[* We are strongly persuaded that if this grass, as we have seen it about the head of West River, were spread over the ground of fields and gardens, quite thinly, soon after the crop is above ground, and weeded, no other cultivation would be necessary. This covering of salt grass, free from seed, would keep down the grass and keep the land moist, letting through the rain and shutting out the sun from the ground. It might easily be tried in gardens, at least. Hogs are very fond of it—whether for the sake of the salt, or for any nourishment it may contain, this deponent never understood. Very large boat-loads were to be had in a very short time; and being as valuable as manure, as stated by our correspondent, we are quite sure that *Long Island farmers* would send miles for it; while on West River we never saw it gathered up from the water, except a few boat-loads—though some do haul up the drier, and, as we should think, the much less valuable sea oar, or sea ooze, or whatever be the proper name. *Ed. Farm. Lib.*]

[† It is much used as food for stock in New-York. Mr. Bell, of Morrisania, a knowing Scotch farmer, values it highly, and uses it freely in that way. *Ed. Farm. Lib.*]

ever comes well authenticated. Some years ago I read an essay which emanated from the Society of Useful Knowledge in England, by a Mr. Hayward, in which it was stated that to sow wheat of the preceding year was an effectual preventive of smut. Not long since, conversing with an old Bay-side farmer, he remarked incidentally that he had no opinion of steeps curing smut. There was but one way in his opinion—sowing wheat two years old. "Have you ever tried it?" said I. "Yes, and I had no smut." This is the only case that has come to my knowledge of its trial in this country. This man never peeped into an agricultural journal in his life; and, if I were to propose to him a subscription to THE FARMERS' LIBRARY, he would set me down as demented. Important facts in Agriculture are often obtained from humble sources, and such a fact as the above is worthy of being recorded. Attention to details is indispensable in all farming operations—success largely depends upon it. I will not trouble you with my simple process, having already occupied too much space.

For the honor of our Shore, I will trespass a moment longer. A member of our Board recently spent a night with a venerable man—Gen. Potter, of Caroline—now far declined in the vale of life. In the course of conversation the General said to him that, many years ago, the British Government appointed an agent to visit the various wheat-growing regions of the earth, to examine their relative merits. The aforesaid agent was at his house, and remarked to him that, after traveling over Europe and the United States, he had come to the conclusion that the best wheat he had ever seen grew on the Eastern Shore of Maryland. This was, doubtless, in those days when the old Virginia white wheat produced such beautiful and abundant crops. And must we now be reduced to the necessity of growing the dark, thick-skinned Mediterranean, to be certain of living? What a calamity!

Most respectfully, yours, THE FARMER OF OTWELL.

☞ Seeing that, in the culture of wheat, early maturity is a desideratum, there would appear to be no doubt of the importance of obtaining seed-wheat of the best quality from *as far north as possible;* and this might easily be done by farmers uniting to engage or import it, through the agency of mercantile houses trading with the north of Europe.

No fact is better known than the rapid growth of all plants in high latitudes. Even in our northernmost States, and in Canada, the burst of spring, the splendor of summer, and the maturity and incipient decay of autumn, follow each other with a swiftness scarcely credible. It is farther observed by the same English writer on this subject (and is not the obser vation equally applicable to our own country?) that

"The corn [grain] sown to-day is in a very few weeks ready for the sickle; and the higher the latitude where it can be made to grow, the shorter is the period it requires for its growth and ripening. Corn which has been grown in the extreme north, when used as seed in a southern country, gives its first produce more speedily, ripening in a much shorter time, although at a second sowing it loses this quality. This fact has been recognized, and is acted upon pretty extensively in this country, it being commonly recommended to obtain seed from colder situations than those in which it is intended to be sown. In Sweden, corn is annually brought for seed from Torneo (in the north of the gulf of Bothnia, and almost within the arctic circle), and sown in lands so much exposed that the sowing time is thrown so late that corn, excepting from seed thus obtained, has no time to ripen. Districts formerly, on this account, utterly barren, are thus rendered fruitful."

It would be very easy to obtain seed-wheat from Canada, at least, or from Maine, if not from northern Europe.

On the principle here advanced, the Irish import their flax-seed from Riga. Vegetables, as well as animals, acquire habits suited to the climates where they are raised; which habits are transmissible for some years after emigration, but are sooner or later lost, in conformity with that law of Nature under which the climate will ultimately change all animal and vegetable productions, and coerce them to conform to its superior force. Even on the human system, the author of Vestiges of Creation remarks that

"the style of living is ascertained to have a powerful effect in modifying the human figure in the course of generations, and this even in its osseous structure."

Has nobody observed that the children of poor people, who lead a precarious life, subsisting on fish and oysters and clams, in piney wood, along creek shores, have generally dead-looking, white hair?

The Cuba tobacco loses its peculiar fragrance, more and more, on being transplanted to a

foreign soil and climate, until, in two, or, at most, three years, its fine odor and other characteristics disappear. So is it with wheat. But how easy for men who disdain to surrender themselves to that *vis inertiæ*, that sloth, which is so apt to overcome—shall we write it?—farmers, above all people!—how easy for such men to supply themselves, as occasion may demand, with that change of seed which, it cannot be denied, sometimes gives capacity to resist some unpropitious influence of climate, or disastrous ravages of the countless tribe of insects, to which the God of Nature has given the same right that man enjoys to derive nourishment from plants and animals, and to some of which "even man himself pays tribute with his blood." [*Ed. Farm. Lib*

CULTURE OF SILK.

MR. EDITOR: In looking through a recent French work, I met with an article entitled "Failure in the Attempt to grow Silk in the United States, and the Reasons for it." Though it might readily be shown, in the neighborhood of Macon, Geo. and elsewhere, that the author is mistaken in the assumption that we have failed in the introduction of the silk culture, yet, as his essay contains many sound, practical views and, withal, some novelty, I have bestowed an idle hour on its translation, in the hope that it may prove acceptable and useful to such of your patriotic readers as are determined to persevere in establishing for their country a product for which she annually pays $10,000,000 at least to foreigners. Let them hear the judgment of those who had begun to dread their rivalry. F. G. S.

"FAILURE IN THE ATTEMPT TO GROW SILK IN THE UNITED STATES.—It is but a few years since the United States, jealous of our success in the production of silk, endeavored to introduce its cultivation there. In many parts of the Union, particularly in the Middle and Southern States, immense plantations of the mulberry were made. The soil was so fertile, and the planters so energetic, that we had reason to fear that the result for us would soon be a formidable competition. And was there not, in fact, ground for apprehension in seeing one of our national products thus attracting the attention of a people never turned aside by difficulties, and so ardent in the prosecution of novel enterprises? Hence it was with regret that we witnessed the departure from our shores of vessels laden with mulberry-trees and barrels of silk-worm eggs; for faithful to their habits of enormous speculation, the Americans planted *forests* of mulberries, and to this is their failure to be attributed. If what we learn be true, the production of silk in the United States is now hopeless: the trees are being grubbed up and the filatures closed. The discouragement is so complete that notwithstanding the vast scale of some of their establishments, the product this year in cocoons will scarcely reach 180,000 kilogrammes, We may now continue, without danger of competition, to draw annually from the United States some $10,000,000 in exchange for our silks.

"Let us now endeavor to account for these disastrous results. We at once perceive a capital error in the exaggerated extent of their plantations and filatures; and it is held *apropos* to recall a truth that has been too often misunderstood: *The production of silk in no wise resembles most other industrial productions.* We may weave flax, wool, or cotton to any extent. With talent, capital and machinery, a man may increase his manufacture indefinitely; but it is indispensable to the successful management of a mulberry plantation that the number of trees should be limited. As a good shepherd should know individually each of his flock, so with the cultivator of the mulberry—he should study the wants and qualities of each particular tree. What is there to be expected of a plantation to be abandoned to itself, and visited but to be despoiled? So with the management of worms: in large establishments an active and minute inspection is difficult; the silk-worm, which in an isolated state is hardy and robust, loses this quality in a measure when gathered together in masses. The greater the agglomeration, the greater the danger; hence the necessity of small rooms and a very limited number of worms. Another cause that has acted more powerfully and fatally than any, was the selection of the *Multicaulis* instead of the *Broussa* mulberry: the former is so sensitive that the sap oscillates in its stem at the slightest variation of temperature; its existence is precarious in France—what must it be in a climate so variable as that of the United States.

"Another fatal error has been the selection of the richest soil, on which to make the plantations a proof of the old adage, "that too much of a good thing is good for nothing," is the fact that leaves from trees of exurberant foliage afford less substantial food, produce less silk, and are frequently unhealthy. Hence, we hear every day of the muscardine being produced by leaves from trees of a luxuriant vegetation.

"Mr. Mallan de Callesaume has proved that the muscardine is much more frequent with worms fed upon leaves from young wood, and that the disease diminishes as leaves are small and dry; such as produced on small and alder-wood."

SCIENCE AND AGRICULTURE.

THE FARMERS' LIBRARY—OBSERVATIONS ON STEPHENS'S BOOK OF THE FARM.

JOHN S. SKINNER, Esq. MONTGOMERY, Orange Co., N. Y., August 21, 1846.

Dear Sir: In the July and August numbers of your excellent periodical, THE FARMERS' LIBRARY, you have published the excellent work of Mr. Stephens, entitled "The Book of the Farm"—a work entitled to high praise for its practical good sense, taken as a whole; although I think the author somewhat in error in some of his remarks in relation to the benefits to be derived by Agriculture from science. Even in this respect I believe him to be in the main correct, the error being in stating his opinions in terms too general, which would be strictly true if more guardedly expressed. It would be truly lamentable if the business of Agriculture were not susceptible of improvement by the aid of science. The most necessary, and, I also think, the most ennobling, occupation of man would thus be sunk below almost every other of his pursuits; because human pursuits are noble or humble in proportion to the amount of intellect they require for their successful prosecution. If to be an eminent farmer only requires good manipulations of the *present* modes of Agriculture, without any hope of improvement from science to *lead* and *direct* practice, the business of Agriculture has arrived at a point to repel liberally-educated men from pursuing it as an occupation. That science has hitherto done but little, directly, for Agriculture, is freely confessed; but how long has science been directly devoted to this object? The time has been so short, and the difficulties of the subject so great, that the wonder is rather that Davy, Boussingault, Liebig, Johnstone and Dana have done so much to prepare the subject for future laborers, than that they have done so little. Every thing must have a beginning. Astronomy had its origin in astrology, and chemistry in alchemy; but now we can calculate the distance of Sirius, and detect the curious isomeric laws of organic matter—now we have got beyond a knowledge of not only the Solar and Astral Systems, and are enabled to speculate rationally about nebular systems—beyond a knowledge of primitive earths, to the metalloids which constitute their bases. Vegetable and animal physiology and chemistry are yet in their infancies, but they are quite as robust and as promising as any of their predecessors at the same age—nay, it may be said, more robust and promising, because, instead of being fed with the stimulating diet of their predecessors, a more rich, nourishing, and simple food is presented to them as the fruits and joint offerings of all of their predecessors.

But, apart from these considerations, "The Book of the Farm" is written with sound practical judgment. The error is on the right side, as practice without theory is safer than theory put in practice without experience. The matter, however, to which I especially desire to ask attention, is the combination of practice and theory he recommends for the education of youth for agricultural pursuits as an occupation. His remarks on this subject are eminently practical and useful. "Experimental farms as places for instruction in farming" he very properly condemns. But I think he should have been more particular in defining what he considered an *experimental farm.* I regard that an experimental farm upon which are collected, for practical instruction, *more pupils than can be profitably and economically employed in the several branches of Agriculture conducted on such farm,* by the easy labor of the farm hands and the pupils. If there are more pupils than can be profitably employed, the excess cannot acquire practical information; or, if they should be employed, the whole number will acquire imperfect knowledge. This observation applies with equal force to the practical farmer who takes twenty, or even five pupils, if he has not profitable and economical employment for them, as to the institution which takes one or two hundred pupils. They differ only in degree. The practical farmer having more pupils than he can profitably employ will probably turn off many slovenly, careless and imperfect farmers; but the institution with one or two hundred pupils will probably turn off many experimental farmers—a class who soon waste an estate, become disgusted with their business, and bring agricultural science to shame.

The economy of a farm has a wider signification than is usually attributed to

it. It signifies everything relating to the profitable management of a farm. It bestows the exact amount of labor to produce the largest results. It demands the exact amount of outlay in manure, stock, buildings, &c. to insure the largest profits. It exacts the performance of labor in the right manner, and at the right time. It requires the produce to be sold, as a general rule, the moment it is ready for market. In short, it must pervade the whole farm, in all of its operations, and cannot be taught in experimental institutions, nor upon farms which have more pupils than can be profitably employed.

We have, in this county, "The Orange County Scientific and Practical Agricultural Institute," which, I think, is admirably calculated to impart to pupils more of the right kind of agricultural knowledge, in the right way, than any institution or method I have heard of. It is superior to the plan recommended in "The Book of the Farm," in this, viz. that the farmers who are engaged in it—the price for board and tuition being very low—take no more pupils than they can profitably employ. They do not, therefore, depend on the pupils for a living, but on their farms; consequently, the pupils learn exactly what they will have to practice when they operate for themselves. At the same time, they have the advantage of being instructed in the scientific branches of an agricultural education, by a thorough-bred scientific gentleman, who is at the same time engaged in Agriculture on a farm of considerable extent, and is capable of performing any of the practical labors. Here, then, we have an institution, the first and only one of the kind, combining all the advantages recommended in "The Book of the Farm," in the highest degree. I can speak of its utility, because I have a son a pupil in it, and live in the neighborhood. I have, however, no other interest in the institution than what is common to the neighborhood, and all others interested in the general improvement and elevation of our agricultural population.—But I feel a degree of pride that a plan so practical, and promising such important results, should be conceived and executed by the ingenuity, enterprise and public spirit of my near neighbors, who projected and perfected it; and, if you think this letter worth a place in your very useful pages, it will afford me pleasure to contribute this, my mite, in communicating a knowledge of it to others who may desire to be benefited by the advantages it offers.

Very respectfully, yours, W. F. VAN AMRINGE.

GRAPES NOT MATURING, &c.

Mr. J. S. SKINNER, New-York: PHILADELPHIA, August 3, 1846.

Dear Sir: I should be glad to obtain information respecting grapes. I have one vine covering a large arbor, on which the fruit never matures. It hangs *very full* every season; and, about the time of attaining their full size, there appears on them a small speck, which gradually increases until they turn black or purple all over, wilt, and fall off. This vine has acted so from its first bearing up to this time, now six years. I have a number of vines on the opposite side of the house, covering a long trellis, which I perceive are going, *this season*, in the same manner; while an *intermediate* one, against the house, is not at all affected. I have tried close pruning, and very little of it, without any perceptible effect.

I observed, I think, noticed in the meetings of your Agricultural Society, reported in The Tribune, some time ago, an account of a superior *farm gate*. I have not had time to examine the LIBRARY from the beginning, which only came to hand a few days ago, owing to a mistake of your agents, but hope I shall find a drawing of it. A good gate is needed. Yours, respectfully, W. H. CARR.

We should be pleased to give the information, if in our power.

In the garden of Mr. Smith, at Astoria, we lately saw a vine in very full and promising bearing, for the first time since it was transplanted. It was an old vine, and had proved barren until this year. The proprietor had buried near its root a good part of *an old horse*, which he had caught floating in the river.

Philadelphia and its vicinity, with their Buists and their Landreths, are by no means deficient, comparatively, in horticultural knowledge and experience. As to the *gate*, we can only repeat—*all in due time!* In Stephens's Book of the Farm, which we are republishing, there are 12 pages given to this subject, with engravings.

IRRIGATION.

We embrace with pleasure the first opportunity since we received, by the politeness of Mr. Sherwood, the President of the New-York State Agricultural Society, a copy of its Transactions for 1845, to lay before our readers the "Prize Essay on Irrigation, by J. J. Thomas."

We have already taken occasion to remark, in reference to this subject, how surprisingly the facilities for irrigation are neglected in our country, in which, with plenty of water at command, and with our hot suns, wonders might be produced in the way of horticulture.—So well is this understood, as stated by a correspondent in the last volume of our Monthly Journal, that in Europe a horse is kept constantly at work, between pumping water and plowing in the garden. (See page 430.) By means of the hydraulic ram, so fully described and illustrated at page 347 of the same volume, every farmer who has a small stream of water is enabled to convey for irrigation a constant current considerably above the natural elevation of the stream, at a trifling expense. The extension of its use in Baltimore and Hartford Counties in Maryland, lately, might be referred to in proof of the utility of this contrivance. Grapes, and other luxurious fruits and vegetables, may now be cultivated with success; and kitchen gardens, heretofore liable to be parched and blighted in dry seasons, may be made to produce in abundance the finest esculent vegetables. While indolence and folly proclaim that there is nothing new under the sun, nor any avenue open to improvement, the curious and spirited inquirer sees a boundless field inviting to hopeful experiment, and pregnant with new and profitable results. To such men every path presents its objects for investigation; and in the hope of some useful discovery, and new means of benefiting society, they find their ample recreation and reward. We shall never tire of holding up to the emulation of all young men in the country, the studies and the works of the men whose amiable and useful propensities lead them to prepare for the common welfare such essays as the following:

IRRIGATION.

PRIZE ESSAY, BY J. J. THOMAS.

Its Utility.—The application of water to the surface of lands, for the promotion of vegetable growth, has been practiced, in warm countries, from the earliest ages. Its indispensably essential use in ancient Egypt, and the great benefits derived from its introduction, at a later day, into Italy, sufficiently established its eminent utility. But, being less necessary in the cooler and more moist climate of Britain, it was afterward less extensively practiced in the system of Agriculture which spread to the settlements of America. The summers of the northern and middle States are equal in warmth to those of northern and central Italy; but in copying the practice of Agriculture from England and Scotland, the wide difference in the heat and dryness of summers has been too much forgotten.

The great advantages resulting from a due proportion of moisture in the soil, must be evident to every one, on a moment's reflection. Who does not know that nearly all farm crops, during vigorous growth, are benefited by frequent showers? Who has not noticed the great diminution in the amount of pasture and hay, in potatoes, ruta-bagas, and other farm products, resulting from long continued or unusual drouth? What farmer is ignorant of the fact that meadows and pastures in wet or moist situations, or which are occasionally overflowed by streams, are covered with a growth of herbage far heavier and more luxuriant than the diminished products of dry and unwatered uplands? Who, then, can question, that during the heat and drouth of our summers, not unfrequently quite severe, our root crops would be greatly assisted in their growth, and our crops of grass double in weight, by artificial watering, through channels spread over the surface of the land?

There appears to be but very few examples in this country, of well conducted and systematic irrigation. A few, however, have sufficiently shown its advantages.

E. D. Andrews, of Pittsford, N. Y. says: "In the hilly country of Vermont, I owned a farm, over which I carried the water of a small stream, in artificial channels, more than a mile. Lands that did not yield half a ton to the acre, were thus made at once to yield two tons; by which means I added to my crop six or eight tons." E. Wilbur, formerly of Yates county, N. Y., while a resident of that county, watered, artificially, a very dry and unproductive seven-acre lot, by means of side channels from a stream which passed through the center. About one day's work was needed in arranging and plowing these furrows. "The effect was such," said he, "that it paid me a hundred fold for the seven acres, after the first year. It produced for several years, while I owned it, from two and a half to three tons of hay to the acre; and the man I sold it to, told me last year that he hardly ever saw such grass—there was hardly room on the ground to make the hay after it was mowed."

In the vicinity of Philadelphia, irrigation has been occasionally practiced. Permanent meadows are selected on the two facing slopes toward a stream, from which the water is diverted by successive parallel channels, carried as high up the sides of the valley as the head of the water will admit. Two and a half tons of hay to the acre are a common crop on lands thus treated.

A brother of the writer, by spreading a small stream over the surface of his meadow, tripled at least the product from the land. A successful farmer of western New-York, by allowing the wash or liquid manure from a barn on elevated ground to spread over about five acres of meadow, cut from a part of it no less than five tons of dried hay. Dr. Kirtland, of Cleveland, says that during the past parching season, a field was made to produce two tons of hay to the acre, by turning on it the wash of the yards and road, and the water from two small springs. He also states that an intelligent farmer purchased a farm consisting mostly of barren side hills, and dry, sterile, sandy flats. He discovered, with the eye of an engineer, that a stream of some size might be turned from a deep glen, by means of a dam, and conducted upon one side of the glen, so as to be accumulated upon the back part of the farm. From this point it discharges at pleasure upon different fields, in different directions. It is an interesting spectacle, to view his different dams and canals, and to see the brook discharging from level to level, dividing and subdividing, over many acres, spreading fertility through all its varied meanderings. At this time, the farm sustains a flock of 500 or 600 of the best Merino sheep. Twenty years since, it would not have fed a twentieth part of that number.

Accidental instances often exhibit strongly the advantages of watering. In a meadow belonging to the writer, a part of the land was occasionally overflowed by a large stream; another portion, of similar soil, was left dry. The watered portion was usually double and sometimes triple in product; and so clear was the line of demarkation between these portions, that high-water mark could be distinctly traced by the difference in growth, at any time before cutting the hay. Meadows on the lower side of the Erie Canal in Niagara county, were noticed last summer, when water had escaped from the canal, to be at least double in growth in consequence; and a farmer who allows the wash from the public road, during all rains, to pass upon his adjacent meadow, cuts annually two and a half tons of hay to the acre.

RATIONALE.—A supply of water to plants is essential on two accounts. First, it is necessary that all plants in a growing state have at hand a supply of the water which enters so largely into their composition. Secondly, that there be enough to dissolve freely all substances which ascend through the stem from the roots; for, without solution, no fertilizing substances can enter the plant.

The large quantities of water needed during vegetable growth, are evident from the abundance which exists in nearly all living plants. Some plants contain more than three-quarters of their weight, and most others more than one-half. In addition to this, the enormous quantities thrown off in hot, dry weather, by perspiration, amounting sometimes to the entire weight of the plant in a day or two, or to several tons daily from an acre, render an abundant supply still more important. Hence the reason they droop and wither so soon, when the usual supply is withheld. Water also, of itself, forms an essential portion of the food of plants, by furnishing nearly all the hydrogen they consume.

But a most important office performed by water, is its solvent power. During

its fall in rain, in washing and purifying the atmosphere as it descends, it brings down matter which had previously risen in the form of vapor; and afterward as it flows along the surface or through the soil, it dissolves many solid substances, and becomes charged with various matters of organic origin, which possess more or less highly fertilizing powers, and which are thus conveyed in a fluid form to the roots of plants. Water thus becomes one of the best and most efficient modes of manuring; the quantity of foreign matter thus held in solution, and the enriching power it possesses, are often almost incredibly large, even though it may appear but little discolored by their presence. There are, of course, various degrees of foreign and fertilizing matters to be found in water, according to circumstances; from the purest brook or river water, to the heavily loaded drainings of the city sewer, or the farmer's manure tank.

In En land, and in all countries so cool and moist that plants do not suffer greatly from drouth, the chief benefit resulting from irrigation arises from the foreign matter contained in the water. Hence it becomes a very important object to obtain such streams as contain the most enriching substances. Some interesting illustrations of this fact have been given to the public. In one case, a gentleman who owned meadows on the bank of the stream which passes through Winchester, observed the great superiority of the waters of the stream below the city, after they had received the drainage of the sewers. The benefits which the plants derived from the water was strikingly shown by its deteriorated quality after it had passed over the fields and imparted its fertility to the plants. On one occasion, after having long enjoyed the exclusive use of a stream, his neighbor, higher up, imitated his example; and the water, in consequence, was so reduced in value, that he thought of disputing the right with him.

An interesting experiment was made in Scotland, to show this abstraction of dissolved substances by the plants. A stream of water before its use in irrigation, was analyzed, and was found to contain per gallon about 10 grains of common salt, and 4 grains of the salts of lime. After passing over fifty yards of meadow, it was again analyzed, and yielded only 5 grains of common salt to the gallon, and 2 grains of the salts of lime.

A long continued flow of the water will thus impart to the plants a large and most important quantity of mineral as well as organic manures. It is not necessary that streams should always appear to the eye turbid or impure, in order to be well adapted to this kind of manuring; indeed a turbid stream, rendered so by the suspension of clay merely, may be less valuable than a limpid stream, which holds gypsum and various other salts in solution. Several analyses have shown that all *hard* waters contain considerable portions of gypsum or sulphate of lime; and that not unfrequently every two thousand parts of the water of our rivers and brooks contain one part of gypsum. If, therefore, every square yard of common meadow soil absorbs only eight gallons of water, more than a hundred weight and a half of gypsum per acre is thus diffused through the soil.

It would be hardly possible to convince the community of the enormous amount of wealth lost to the country yearly by a neglect to secure the liquid manure with which it abounds. The quantities which are every year swept from our fields and farm-yards, and carried through our lands, unapplied, in running streams, into our rivers and lakes, and into the sea, might safely be estimated at millions. The sewers of towns and villages alone carry off a vast amount of manure. A meadow near Edinburgh, belonging to the Earl of Moray, which was watered for several years by drainage from the city, yielded so heavy a crop of grass that it was cut six times a year, and the whole yearly crop was sold at $120 to $150 dollars per acre.

But even throwing the manuring process, strictly speaking, out of the question, who can estimate the beneficial results of judicious irrigation, if generally applied through the country, wherever running water is accessible? During hot and dry summers, our parched and withered grass fields, and our diminished and stunted ruta-baga and potato crops might in many situations be at once stimulated into freshness and vigor, and doubtless be double in product. The artificial improvement of supplying manure to the soil is universally practiced and commended, and considered the first and last requisite in successful culture; while the artificial application of water, which, unlike manure, costs nothing, nor requires the labor or expense of cartage, but is often equally if not more important, seems to be nearly unknown. Why should the Yankees be behind

other portions of the world in this particular? We do not lack proofs, sufficient to every observing mind, even in the rough and wild manner in which it is performed by the inundation of the flats of creeks and rivers, nor has such proof been wanting, from the overflowing of the Nile in ancient days down to the present age of the world; but the artificial process possesses this eminent advantage, that while the former is uncontrollable and uncontrolled, the latter may be applied or withheld at pleasure, as the crop suffers from drouth, or becomes injured by too heavy a flooding.

Fig. 1. Fig. 2. Fig. 3.

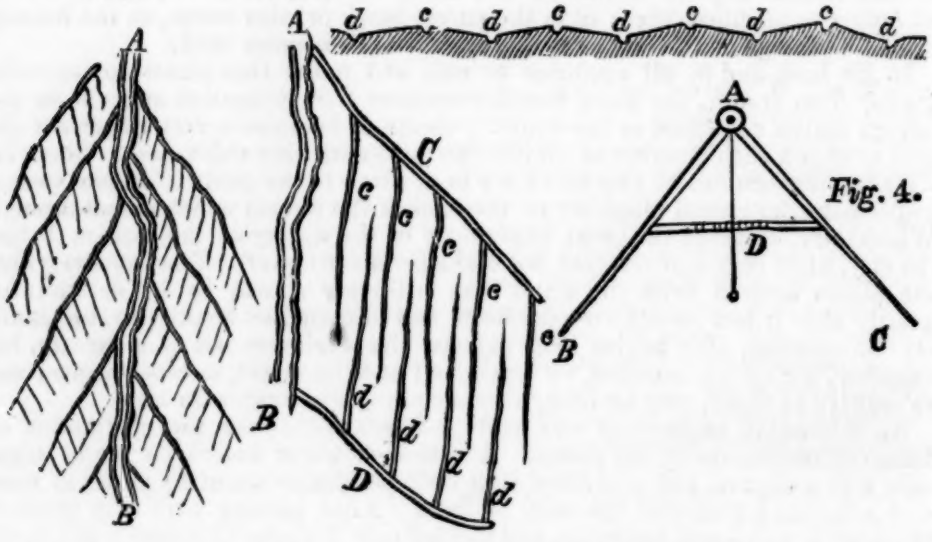


Fig. 4.

Modes of Practice.—The simplest mode is represented in Fig. 1, where A B is the stream to be used, running in the bottom of a valley. From this stream the water is conducted in channels on each side as high up the sides of the valley as a moderate current in those channels will admit, and from these the water is made to escape through holes in small pieces of boards, placed at regular intervals, so as to spread the water over the surface below. If the sides of the valley are steep, the angles which these channels will form with the main stream will be acute, that is, it will be necessary to conduct them to a considerable distance down the valley, in order to recede much from the main stream. Where, however, the land is more nearly level, they will diverge from the stream more nearly at right angles.

Where, however, the land lies very nearly on a level it becomes necessary to guard against the stagnation of the water upon the surface. This object is accomplished by means of the mode represented in fig. 2, where the channel C carries the water from the main stream, and from which again the smaller channels *c c c c*, conduct the water more evenly over the surface. To prevent the water standing on the ground, small drains *d d d d*, are made between the channels and alternating with them, which convey the water to the main drain D, through which it again empties into the stream.

When land subjected to irrigation is nearly level, it should be plowed into "lands" in such a manner that the channels for distributing the water, as in fig. 2, may be upon the ridges, and the drains in the dead furrows. This is shown by the section represented by fig. 3, *c c c c*, being the distributing channels, and *d d d*, the drains.

Laying out the Channels.—This can never be done with sufficient accuracy without a leveling instrument. The cheapest for this purpose is represented by fig. 4. It consists of the two legs AB and AC, which should be light, but not less than ten leet long, connected and stiffened by the cross bar, the two ends of which must be exactly equidistant from the point A. A plumb line is suspended from the summit A, and if the legs stand on level ground, the line will cut the cross bar exactly in the middle; but if the point of one leg be lower than the other, the line will fall out of the center and toward

that lower leg. The difference in the level of the two legs will be accurately indicated by the graduated scale on the cross bar. If, for instance, the distance AD be one-third the length of one of the legs, (the angle formed by the two legs being a right angle,) then a movement of the plumb line half an inch from the center, would indicate a difference in the level of the two points of the legs of about two inches. The following is a general rule for this purpose applicable to all cases with sufficient accuracy, where the ground does vary greatly from a level. Multiply the distance AD by the number of times the leg exceeds it in length, then, as fourteen is to twenty, so is the product to the difference in the level of the two points of the legs.

If the two points are therefore one rod apart, a channel may be expeditiously and accurately laid out, so as to have a slope of two inches in a rod, by placing the level in such a position that the plumb will fall half an inch from the center if the distance AD is one-third of AB, or seven-tenths of an inch from the center, if AD is half of AB, according to the above rule. Successive points are thus found by alternately bringing forward the legs of the instrument, each being two inches lower than the preceding. Small sticks are driven into the ground at these points, and by them a uniformly descending furrow is easily and accurately plowed for a distributing channel. If half that slope only is needed, one-half the distance from the center of the graduated bar is to be taken.

The preceding course of marking the channel is more particularly adapted to uneven ground, where every rod of distance must be accurately known. But, on large tracts of nearly level land, it will be easier to attach two *sights* at the ends of the cross bar, and take longer observations—a rod, marked at a hight equal to the hight of these sights, being held at a distance by an assistant.

Such a level may be made to close, like a pair of compasses, when not in actual use. If the points are accurately one rod apart, the operation of measuring the distance is combined with that of leveling.

Precautions Needed.—Irrigation, like every other farm operation of importance, needs to be conducted with care and skill. A want of judgment or proper intelligence may in some cases lead to failure, or greatly lessen advantages.

Practice has fully shown that too long a continued and heavy flooding of upland plants is actually prejudicial to their growth. The plants should enjoy the full benefits of both air and water. There is no better way of accomplishing this object than to keep the water constantly passing over the surface in a tolerably brisk current. It must not be so rapid as to wash away the soil, nor so slow as to stagnate, or to drown the plants. It is only while water is in motion that plants are enabled to draw from it to advantage, by successive fresh supplies, the nutritive substances it contains in solution. A farmer accustomed to the appearance of plants when in the most rapid and healthful state of vegetation, will detect at a glance any injury which an overdose of water may occasion, when the supply should be withdrawn. Excessive irrigation may also prove injurious where it produces a water-soaked subsoil, the remedy for which should be draining. Indeed, so different in nature is a water-soaked and an irrigated soil, that, while the former injures, the latter benefits; the former state resulting from a want of draining, and the latter always proving most eminently beneficial on well drained land, where stagnant water can never accumulate.

Equal success has not always attended irrigation, in consequence of the different quantities of enriching matter contained in different streams. The most valuable, usually, are those which have passed through a thickly populated country, and have received and become saturated with different kinds of waste manures. Hence the drainage of sewers, and the washings of roads, are particularly valuable. Sometimes, however, there are fertilizing substances derived from the soil or the minerals it contains, which may not in the least disorder the water, and yet be of very important benefit. These can only be known by their effects in practice, or by analysis. But these considerations more particularly demand attention in cool and moist climates, as in Britain, where the simple application of water is unimportant. Hence, there autumn and winter irrigation is much practiced—the water being then charged with animal and vegetable matters which have accumulated during the summer. In the United States, where a supply of

water during drouth and heat is so much more essential, this difference in the richness of water is not so visiby observed.

In using small streams, on considerable acclivities, by *catch-work* as represented in fig. 1, temporary means of diverting the water from the main channel may be resorted to, and there can possibly be a failure. But, in larger streams, the work should always be well formed at once. A good permanent dam must be made, and substantial *hatches*, or solid framework furnished with a sliding grate, inserted. In using small streams, many diverging channels may be cut; in large ones this cannot be done, from the cost of many large dams; a single dam may, therefore, be used, from which a main side channel should pass, to be subdivided according to the circumstances of the case.

Irrigation will always need an exercise of the judgment, to be done in the best manner; no two pieces of land being exactly alike, and the irregularities of the surface varying in many ways, the plan of the work or the distribution of the channels must vary. Each, therefore, requires a different design, adapted to the circumstances of the case. But no one should be deterred from an attempt, nor lose the eminent advantages of irrigating his grounds, because he cannot attain perfection at once.

It is sometimes objected to watering grass and other lands, that the crop, though greatly increased in quantity, is lessened in quality. This is indeed true to a small degree, but not more so than results from an increased growth by stable manure. The slight inferiority in quality is immeasurably overbalanced by the increase in bulk. No objector would desire his hay crop to be lessened one-half in quantity by a parching drouth, in order that the hay might be better.

Application to Different Crops.—Irrigation is usually applied to grass land, but there appears to be no reason why it may not be greatly advantageous if used for different cultivated crops during our hot summers. S. Williams, of Waterloo, N. Y. states that, during a severe drouth, he admitted water in small gutters between the hills and rows of vegetables in his garden. "In ten days, early potatoes grew two-thirds in size." In fact, he never obtained good potatoes before. Other vegetables were greatly benefited. The great increase by watering, in the growth of spinach, lettuce and strawberries, by the English and Flemish gardeners, is well known. In a warmer climate, the advantages would be increased. "The melon," says Lindley, "acquires its highest excellence in countries where its roots are always immersed in water, as in the floating islands of Cashmere, the irrigated fields of Persia, and the springy river beds of India." But the same experiments were not attended with such success in London, where the leaves perspire less, and the climate is cooler. During the past summer, raspberry plants, watered by the drippings from the eaves of a workhouse, grew triple the size of others deprived of this advantage.

But as all plants are rendered more succulent by watering, the supply of water should be withheld to all that bear fruit, as the period of maturity approaches, or diminished flavor will be the consequence.

Calculating the Velocity of Water in Channels.—It often becomes a matter of some consequence, not only in cutting channels for irrigation, but for surface drains in reclaiming wet lands, to know the exact amount of water which may be carried with a given descent in the stream. To enable any person to calculate this readily, the following rule is given, and may be readily used by any boy who understands common arithmetic.

To ascertain the mean velocity of water in a canal or river flowing through a straight channel of equal size throughout:

Let f = the fall in one English mile in inches;
Let d = the hydraulic mean depth;
Let v = the velocity in inches per second, then

$v = 1.23\sqrt{df}$.

The hydraulic mean depth is a quantity which, when multiplied by the perimeter of the channel in contact with the water, gives an area equal to the area of the section.

Example: Suppose a furrow is cut six inches wide and four inches deep, with perpendicular sides, and that it descends one inch in a rod; to find the quantity

of water that will flow in it. It will fall 320 inches in a mile; the perimeter in contact with the water will be, six inches on the bottom and four inches at each side = 14 inches; the area of the section will be 6 times 4 = 24, which, divided by 14, the perimeter, gives 1.7 = the hydraulic mean depth. Then by applying the above rule,

$v = 1.23\sqrt{320 \times 1.7} = 1.23 \times 7.4 = 9.1$ inches, the velocity per second, or about one gallon per second, or one hogshead per minute.

In practice, considerable allowance must be made for rough and uneven sides and bottom, which would tend to retard the current. In larger channels, the calculation would be more accurate.

BARLEY.

We much regret, and for one particular reason, that we have not had time to compile a paper on this subject for this number, as we have reason to think that some judicious wheat-growers may be disposed to try it, in lieu of that grain, which the attacks of pestiferous insects and the casualties of seasons have conspired to render a very uncertain crop, and which the cheap lands and cheap labor of the Western States, with the facilities provided by the Atlantic States for its transportation to our sea-ports, still farther coöperate to render an unprofitable crop, even when not overtaken by either of the disasters referred to. How can the grain-grower, especially the slaveholding grain-grower, whose force, to be constantly supported, is applicable to the production and preparation of this crop, for so short a period of its growth and preparation for market, compete, when it gets there, with the new settlers of the prairies, who, according to the judgment of an Editor of a leading Journal of Commerce, who lately traversed that region, can make wheat at 16 cents a bushel? The question is indeed a serious one with farmers of the old States, to what product of the earth shall they turn for a living profit? Where are the non-producing consumers to be found to demand to eat or to wear it when made? Hence, the truth can never be too deeply impressed on the actual cultivators of the soil, that the happiest condition for them is that in which there is the greatest number of people, and these in the most prosperous circumstances, with bellies and backs waiting to demand his meal, his flour, his meat, and his wool. Better, if he *must be taxed*, that he should be taxed for this, than for the support of armies and army contractors. But, to come back to Barley: we have reason to expect a paper on the subject, in time for our next number, from the pen of a gentleman in the western part of New-York, who is thoroughly conversant with its culture in that State, and to whom we have addressed a letter covering the whole ground of inquiry. This has been done more particularly for the benefit of Wheat growers in Maryland.

From the Library of Agri. and Hort. Knowledge.

BARLEY.

On the Cultivation of Barley; Communicated by Mr. Hitchins, Land-Surveyor, Brighton.

Barley. *Hórdeum.* Tryándria Digy'nia, Linn.—Nat. ord. Gramíneæ.

Barley is considered to rank next in importance to wheat: there are six species and sub-species in cultivation, besides varieties.

1. *Hórdeum vulgàre*, spring or early barley.
2. " *cæléste*, a variety of the above.
3. " *hexástichon*, winter, square, or bear barley.
4. " *dístichon*, common or long-eared barley.
5. " *dístichon nùdum*, naked barley.
6. " *Zeocríton*, sprat or battledore.

There is no grain, perhaps, more affected by soil and cultivation than barley, the same species exhibiting opposite qualities, modified

by the nature of the soil from which it is produced: these opposite productions of the same individual will, if sown at the same period, on the same land, and under the same course of cultivation, exhibit corresponding differences, which are manifested during the growth of the crop, and subsequently in the quality of the sample when in hand. Thus the finest samples, the growth of suitable and well-cultivated lands, would, if sown on a poor and sterile soil, become alike coarse in appearance and indifferent in quality. This fact, however important, has hitherto but little engaged the attention of the farmers in the southern part of England; and the spring or early barley, without reference to quality, is therefore indiscriminately sown, as being found more productive for the purpose of malting than any of the beforementioned varieties. The sprat or battledore barley makes good malt, and being short and erect in the ear, and tapering in the stem, is, on strong lands, less liable to injury from falling, and is, consequently, preferred by a few individuals. The common or long-eared barley, being long in the ear and weak in the straw, is very liable to lodge early, whereby the grain is rendered inferior in quality, and is, therefore, not extensively cultivated. Naked barley, or wheat barley, is so termed in consequence of the grain separating readily from the chaff when threshed. It is a native of the North, and will bear sowing early in the season; it is not, however, in much estimation in the south of England, and is seldom cultivated, although it makes strong malt, and is excellent for fattening of hogs and cattle. Winter barley, or square-eared barley, is grown to a considerable extent in the north-western part of England and in Scotland. It is usually sown for the feeding of sheep in the south of England, and mixed with tares for the soiling of cattle. As food for sheep it is far more productive than rye, as it admits of being fed down every two or three days during summer; and if intended for seed, it may previously be fed off by sheep early in the season without injury to the crop.

CULTURE, &c. *Soil.*—The land that produces the best barley is generally of a silicious, light, pulverulent and dry nature; for a good mellow preparation and free soil are essential to the growth of malting barleys. Cold. wet soils, which are peculiarly retentive of water, are ill adapted to the growth of this grain, both in reference to its weight and malting qualities. The whole matter of barley and its straw contains more silicious particles than that of any other grain cultivated by the British farmer, and hence the reason why a sandy soil is most congenial to the growth of this plant.

PROPAGATED—*By seed* sown either broadcast or in drills, the quantity varying according to the quality of the soil, cultivation and time of sowing; less being required on rich mellow lands than on poor soils; early sowing with good tillage requiring less seed than late sowing with indifferent tillage.

The quantity of seed per acre, if sown *broadcast*, varies from four to six bushels; if *drilled*, a less quantity will be required; and on very rich soils less than four bushels will be sufficient.

Time of Sowing.—The common sprat barleys may be sown from the second week in March, if the weather prove dry, until the tenth of May. The Big, a variety of the winter barley, will stand against the winter, and may be sown either in the autumn or the beginning of March. The Bear or square barley should be sown as early in the autumn as the clearing of the harvest will admit, and may be sown after wheat, barley, oats, or any pulse crop, being a plant of sturdy growth.

In the Choice of Seed, great care should be taken that it is not of a reddish hue, as in that case it is more than probable that a great part of it will never vegetate; the sample should be of a pale lively color, and uniform throughout. Some farmers, not aware of its importance, are in the habit of sowing *thin corn*, but unless the land is quite adapted from its nature and cultivation for the fullest encouragement of the plant, it will in the end be found a 'penny wise and pound foolish' speculation. In all cases it will be well for the farmer to select the finest samples and the plumpest grown, for, in unfavorable seasons, the crop from thin grain is always delicate, and assumes an unkindly hue—while, on the contrary, plump seed throws up strong, healthy stems, capable of resisting the effects of inclement seasons, and in more congenial weather pushing forth with renewed vigor and redoubled strength.

Preparation of the Soil.—Barley, for the most part, succeeds best after turnips, tares, potatoes, carrots, mangel-wurzel, or other green ameliorating crops, but does not succeed so well after wheat or other white straw crops, nor after rape so well as other green crops, except on the south downs and certain lands adjoining the sea coast—where both the quantity of grain is greater, and the quality better after wheat (particularly wheat sown upon a clover ley), and also after rape, than from any other course of tillage. The land requires more or less plowing, according to the quality of the soil, and the state in which it is found, after the season for the working of it commences. On retentive soils, as compact gravelly clay, if the turnips have been fed off during wet weather, the earth breaks up in large clods, and requires to be reduced by the roller, and at least a second plowing should be given before the barley can be safely sown. On light soils of the best quality, one plowing may be sufficient; but if the land is twice plowed in the spring as soon as it is sufficiently dry for that purpose, it will be found amply to repay both the labor and expense. Early weeding should be attended to, or the crop will be injured by treading, and the roller should be used before the blade becomes spindled.

Harvesting.—In the harvesting of barley more care is requisite than in taking any of

the other white crops, even in the best of seasons; and in bad years it is often found very difficult to save it. It should not be cut until quite ripe, the ears seldom falling off excepting from high winds. It should be suffered to lay in the field until the straw is quite dry, being turned over early in the morning while the dew is still upon it: this practice is found to improve the color of the skin, and thereby renders the grain of more value to the maltster. It should never be carried unless perfectly dry, otherwise it is in danger of being heated in the mow, which reduces the value of the grain very materially, for the undue action of the heat destroys the spear or germination of the grain, the malting process is consequently very unequally performed, and, as the *duty* has to be paid upon the whole bin, maltsters will scarcely purchase such samples unless for the purpose of grinding, and then always at an inferior price. It will be prudent, therefore to carry *oats* in the early part of the morning, until the heat of the sun has evaporated the dew from the *barley*, when it should be carried in a perfectly dry state the remainder of the day, until the dew is again deposited in the evening.

It is a very common practice to sow clover and other grass seeds with this crop, but great care must be taken that they are thoroughly harvested, for, otherwise, considerable fermentation will be created, and the sample injured. It not unfrequently occurs, that, when it is supposed to be well harvested, heat is soon found to subsist in the mows, which should be daily examined, by placing a long iron spit, that should be kept for the purpose, deep into the mow, when, if the heat is found to increase, no delay should take place, but the middle should be instantly cut asunder and taken out, in proportion to the size of the mow, when it will generally escape without farther injury. This operation, however, must not be deferred, as the injury sustained rapidly increases. When barley is grown in large quantities, it is usual to tread the mows with horses or oxen, to get as much as possible into the barns, in which case more guarded caution is necessary than when thrown loosely over the floor.

Threshing.—This grain should never be threshed by a machine, as the injury done thereby is frequently of a very serious import to the grain; it bruises the malting spear, which is as injurious to the maltster as if heated in the mow, and should therefore be guarded against. Care must also be taken not to have too large heaps lying together without frequent examination, as, until it has undergone a proper fermentation in the mow, it will be very apt to heat in the heap, in order to prevent which, it requires to be moved daily, or each other day, till cleaned up from the chaff, which, from the fineness of its texture, scarcely admits the introduction of air, and consequently promotes fermentation.

Use.—1. This grain is not only the most useful for making into malt, but is the best of food for promoting the fattening of hogs, after they have been fed to a certain extent with beans, peas, or other food, from which it has been found that the meat is not only more tender, but increases in boiling, while the meat of those fed on beans and peas alone has not only been hard, but has not yielded any increase. Barley is also good food for horses after being soaked in water, and allowed to vegetate, if given in the spring of the year in small proportions with oats; and when given with other grain in its ground state, is an excellent food for fattening bullocks.

2. *The straw* is used for feeding cattle and for litter.

3. Malt is the great purpose to which barley is applied in this country. To understand the process of malting, it may be necessary to observe, that the cotyledons of a seed, before a young plant is produced, are changed by the heat and moisture of the earth into sugar and mucilage. Malting grain is only an artificial mode of effecting this object. The grain is steeped in cold water during a certain period; the water is then allowed to drain off; the grain is spread out into a deep heap; it gradually heats; the rootlets begin to shoot out; afterward the plumula begins to grow; and when this has grown to a certain extent within the grain, the farther germination is checked by exposing the grain on a kiln, heated by fire to such a degree as extinguishes the vitality of the seed. At this period it is found that the starch is, in a great measure, converted into saccharine matter, and by subsequent fermentation or distillation, either beer or spirits is obtained.

THE BORER IN APPLE-TREES.—W. Buckminster, at an agricultural meeting at the State House, Boston, stated that the borer, which is a fly in its perfect state, lays ten eggs on the tree near the ground; that they hatch young worms and enter the bark the first year; the next, they eat into the wood and ascend; and the third, come out and change to the perfect insect. He says the best remedy is to wash the trees with strong lye in July, after the eggs are laid, and before the worms have buried themselves in the bark.

PROTECTING TREES FROM MICE.—A correspondent of the Gardener's Chronicle mixes soot and milk till of the consistence of thick paint, and then applies it to the trees with a brush. This, applied once a year, he finds effectual protection against hares and rabbits. Would it not be equally so against mice?

PROFESSOR OF AGRICULTURE FOR YALE COLLEGE.

Among the most auspicious signs for the cause of Agriculture is the appointment, recently, of J. P. Norton, Esq. to an Agricultural Professorship in Yale College, Connecticut.

Mr. Norton had the fine spirit and good sense to go, some years since, to Edinburgh, the head-quarters of chemical science as applied to Agriculture, and has there had the advantage of pursuing the study under the ablest teachers, as well in the field as in the laboratory; and we shall be mistaken in the tokens of an improving public taste, if *his* class at College be not as numerous as he can do justice to. But we should suppose he would be demanded, if to be had, for the Smithsonian Institute, at Washington.

There must be a beginning to everything; and we apprehend the beginning is now, when Agriculture will no longer lag in the rear of other pursuits, either in public opinion or in the fostering care of the Governments, of the States, if not of the Union. Is there any good reason why the people should be taxed for educating two or three hundred every year, and to whom life commissions and good pay are to be given, to strengthen our arms for *war*, and yet not give one dollar to *teach* (without afterward giving them commissions and pay for life) and qualify men to go teaching surveying, and mapping, and the art of road-making and bridge-building, and chemistry, and mineralogy, and botany, and natural history, and all applications of the arts to industrial pursuits, which would promote a better knowledge of Agriculture, manufactures and commerce?

If the people had sense and self-respect enough to compel their Representatives to expend one-fourth as much for the dissemination of *useful knowledge* and the *perfection of the industrial arts* as they now expend every year on war and warlike objects, the time would soon arrive when all wanton promoters of war would be dreaded and doomed as so many mad dogs.

UNCERTAINTY OF THE WHEAT CROP.

"Berries of Wheat."—We hope neither this expression, nor any cockneyism, may grow into use among our agricultural writers. Blackberries and whortleberries, and even berries of grapes—but not berries of wheat. Is it not enough to say, the grain of the wheat is smooth, or round, or red, or white?

Extract of a Letter, dated "Talbot County, Md. 17th Sept. 1846.

"I don't know what to do myself; I have never known so much uncertainty manifested by farmers in my life—by men, too, having much practical experience. Since I wrote you I have ascertained the product of my *Kloss Blue Stem Wheat*. I procured 10 bushels of seed; it was seeded on fair, good land, and yielded just 33 bushels, three times through the fan. Another farmer seeded 5 bushels on well-prepared fallow, about the middle of September, and got but 10½: it was destroyed by fly. Gen. T., on the other hand, made a fine crop of this wheat, the seed obtained from the same source. Of the several varieties alluded to as having been seeded by a young farmer near me, the Kloss was the best, and the famed China, or Hardware, good for nothing. Again, another farmer, who had Mediterranean, Kloss and Hershey all growing in the same field, informed me recently that the latter had proved the most productive. And yet another, who had the Polish, which is a beautiful white wheat, and Hershey growing in the same field, the latter was so white and fine that he mixed it with the other, and expected to get the maximum price for the best family flour; and I have no doubt that he will, from the representation of several to me who have seen it. Thus you see the great uncertainty of the wheat crop with us, and the necessity of throwing out all the light which can be shed upon the subject."

COLOR OF FOWLS.

"BEAUFORT, S. C. 24th June, 1846.

"A NEIGHBOR informs me that he had nine young Guinea fowls of that color (ash) and three of the dark gray, hatched by the same hen and treated alike, the result of which was, that he raised the three common ones, but not one of the ash-colored. The white could not well raise less, but must, if possible, be still more delicate. I had a pair of white for two or three years, but never saw a young one from them. I had also, for two years, a pair of white ducks, with large white top-knots, or crests, like Poland fowls, but never raised one with the top-knot. They also, are found to be very hard to raise.

"By-the-by, I quite agree in opinion with Gen. HARMON about the kinds of sheep for persons situated far from a market, and have acted up to my belief; for I have refused Bakewell's, offered in exchange, and even for nothing, preferring to keep to the Merino, which unquestionably gives the sweetest lamb and mutton, more especially when fed, as mine are, upon *salt marsh pastures*. The Parisian taste quite agrees with mine on the subject of sheep pasture, as I well remember that in the *Magazin de Comestibles* there, the "*Gigots de Pré Salé*," are much more remarkable for the size of their price, than for their own size."

We have heard it remarked by a gentleman of science and very various knowledge, the Editor of the Southern Cultivator, published at Augusta, that a fowl so remarkable as a white Guinea fowl is originally produced, like the "white blackbird," (which is seen occasionally,) by some disorder in the secretions or coloring matter, indicating unhealthiness in the individual. The inference is, that such peculiarities cannot be so continued as to establish a new variety. Sometimes we meet with persons who are born with a *tuft* of *white* in the midst of a suit of dark hair: the celebrated ALEX. HAMILTON was so marked at his birth and the mark was inherited by his son of the same name. Doubtless white fowls of almost every kind are more tender than others; so it certainly is with the white turkey and the white Guinea fowl; still, that these are established varieties of their families respectively, is proved by the fact that we continue to have them. The egg of the Guinea fowl is far richer and yet more delicate than the hen's egg, and the turkey egg stands next on the list for flavor and excellence, to be eaten from the shell; yet we were surprised to hear Judge Mitchell say that in New-York his market man had to give "two for one," to make sale of his Guinea fowls' eggs. As for the *white top-knot duck*, we suppose it to be an original natural variety, as we have often seen them, and lately more especially, quite a large, healthy looking young brood at Plandome, on Long Island, and though not yet *feathered*, their top-knots were well developed. So, too, at Roswell House, New-Jersey, there are the white turkies, the white Guinea fowls, the white puddle duck, with and without top-knots, and white Muscovy ducks.

No better sign, in our judgment, than to see a farmer take pleasure in all these apparently small affairs. It shows that he has a mind attuned to nature—one that qualifies him to enjoy what may be called the music and the poetry of his profession, and in lack of which he will be apt to seek relief from its inevitable cares and labors in things less useful, as well as less innocent.

Apropos of the coloring of birds, we find the following in a newspaper:

A REMARKABLE DISCOVERY.—Professor Auckland, at a meeting of the Royal Society in London, (the Duke of Cambridge in the chair) read a paper upon a discovery he has recently made, which promises not to be of any great utility, but, at the same time, will be

very ornamental, and a source of great pleasure to many persons. His experiments were made upon what Linnæus terms the *Oiseau Noir*, our common blackbird. He took several of these birds (which were hatched early in the spring) immediately from the shell—kept them in a well warmed apartment, and fed them three times a day, upon different kinds of flower seed, from which the husks had been carefully picked. The result was, each bird had the plumage of the flower that would have grown from the seed, if planted in the ground. This is a beautiful research, and richly has the learned Professor been paid. He exhibited to the Royal Society several specimens. His Highness, the Duke of Cambridge, immediately gave orders to the keeper of his aviary, to make experiments on an extensive scale. Professor Auckland's birds were sent by special express to the Queen.

TABLE TO MEASURE PLOW-WORK.

THE following table may prove serviceable, as it will enable the farmer to reckon, with exactness, how much work is done—that is, how many miles are traveled over in a day when the work done, as it proceeds, is of a *given width.* If, for instance, the plowman turns a furrow of seven inches wide, and he can do at that rate an acre a day, traveling fourteen and one-eighth miles, then it follows that with a cultivator or harrow, which operates as it goes, over a breadth of twenty-one inches, he ought to get over three acres a day, to say nothing of the time saved in *turning* once instead of three times; and this shows the economy of the cultivator over the plow, for it not only enables one man to get over as much ground in a day as three would do with a plow, but it requires only one-third of the horse power and horse feeding.

Here, in truth, in the substitution of the cultivator for the plow, lies the secret of the so much greater quantity of corn and tobacco being made to the hand than was formerly done within the recollection of many of our readers. If contrivances for saving our crops had kept pace with ingenious devices to save labor in making them, much more would have been achieved for Agriculture. In no country does land so much demand capital, or Agriculture so vehemently cry aloud for labor-saving implements, as in America.

We are confident that while much has been done, as we can affirm, within our own recollection, much more remains to be accomplished. Steam, for instance, has scarcely been made to contribute all it should do to the purposes of the husbandman—nothing in comparison with what it has done for commerce, for manufactures, aye, and even for that scourge of the world, *war!* But, when the proper books and proper sort of study come to be in use, and prevail in all our country schools, the landed interest, and those who are to represent it, will become imbued with a just sense of its importance and its rights; and these will be reflected and guarded by public *legislation*, and the public sentiment, until those who appropriate the common treasure of the people, of which so much is drawn from the agricultural community, will not *dare* give a dollar for any project or establishment, without appropriating *at least an equal amount* for agricultural knowledge and discoveries. But what can one journal effect toward awakening public sentiment, when even kindred journals deem it not expedient or safe to say a word for the political rights of Agriculture? Still we will not altogether repress the hope that the faintest whisper, in so good a cause, may swell into the trumpet's blast, and the *people of the land* become awakened to a sense of their rights and a *consciousness of their power.*

TABLE.... BY JOHN MORTON.

Showing the distance traveled by a horse, in plowing or scarifying an acre of land; also, the quantity of land worked in a day, at the rate of sixteen and eighteen miles per day of nine hours.

Breadth of furrow-slice, or scarifier.	Space traveled in plowing an acre.	Extent plowed per day, at the rate of	
		18 Miles	16 Miles.
Inches.	Miles.	Acres.	
7	14 1/8	1 1/4	1 1/8
8	12 1/4	1 1/2	1 1/4
9	11	1 3/5	1 1/2
10	9 9/10	1 4/5	1 3/5
11	9	2	1 3/4
12	8 1/4	2 1/5	1 9/10
13	7 1/2	2 1/3	2 1/10
14	7	2 2/5	2 1/4
15	6 1/2	2 3/4	2 2/5
16	6 1/6	2 9/10	2 3/5
17	5 3/4	3 1/10	2 3/4
18	5 1/2	3 1/4	2 9/10
19	5 1/4	3 1/2	3 1/10
20	4 9/10	3 3/5	3 1/4
21	4 7/10	3 4/5	3 1/3
22	4 1/2	4	3 1/2
23	4 1/4	4 1/5	3 7/10
24	4	4 1/3	3 9/10
25	4	4 1/2	4
26	3 4/5	4 3/4	4 1/5
27	3 3/5	4 9/10	4 1/3
28	3 1/2	5 1/6	4 1/2
29	3 1/2	5 1/4	4 2/5
30	3 1/3	5 3/4	4 4/5
31	3 1/5	5	5
32	3 1/10	5 4/5	5 1/4
33	3	6	5 1/2
34	2 9/10	6 1/5	5 1/2
35	2 4/5	6 1/3	5 3/5
36	2 3/4	6 1/2	5 4/5
37	2 2/3	6 1/4	6
38	2 3/5	6 9/10	6 1/8
39	2 1/2	7 1/8	6 1/3
40	2 1/3	7 1/3	6 1/2
41	2 2/5	7 3/4	6 3/4
42	2 1/3	7	6 2/5
43	2 3/10	7 4/5	7
44	2	8	7 1/10
45	2 1/5	8 1/6	7 1/4

Breadth of furrow-slice or scarifier.	Space traveled in plowing an acre.	Extent plowed per day at the rate of	
		18 Miles.	16 Miles.
Inches.	Miles.	Acres.	
46	2 1/6	8 1/3	7 2/5
47	2 1/10	8	7 3/5
48	2 1/12	8 3/4	7 3/4
49	2	8 9/10	7 9/10
50	2	9 9/10	8 1/10
51	1 9/10	9 1/5	8 1/4
52	1 9/10	9 1/2	8 2/5
53	1 9/10	9 3/4	8 1/2
54	1 4/5	9 4/5	8 9/10
55	1 4/5	10	8
56	1 3/4	10 1/4	9
57	1 3/4	10 2/5	9 1/3
58	1 7/10	10 3/5	9 1/3
59	1 7/10	10 3/4	9 1/2
60	1 3/5	10 9/10	9 7/10
61	1 3/5	11 1/5	9 4/5
62	1 3/5	11 1/3	10
63	1 3/5	11 1/2	10 1/5
64	1 1/2	11 7/10	10 1/3
65	1 1/2	11 4/5	10 1/2
66	1 1/2	12	10 3/5
67	1 1/2	12 1/4	10 4/5
68	1 1/2	12 2/5	11
69	1 1/2	12 3/5	11 1/8
70	1 1/2	12 3/4	11 1/3
71	1 1/2	12 9/10	11 1/2
72	1 1/2	13 1/5	11 3/5
73	1 1/2	13 1/3	11 4/5
74	1 1/2	13 1/2	12
75	1 1/2	13 3/5	12 1/8
76	1 3/10	13 4/5	12 1/4
77	1 3/10	14	12 1/2
78	1 1/4	14 1/4	12 3/5
79	1 1/4	14 2/5	12 3/4
80	1 1/4	14 3/5	12 9/10
81	1 1/5	14 3/4	13 1/10
82	1 1/5	15	13 1/4
83	1 1/5	15 1/5	13 2/5
84	1 1/6	15 1/3	13 3/5

From the Southern Agriculturist for June, 1846.

ANALYSIS OF THE ASHES OF THE SUGAR CANE.

NEW-HAVEN, April 28, 1846.

MR. EDITOR—*My Dear Sir:* Knowing that some of your readers would take an interest in the following results upon the *ashes of the sugar cane*, obtained by Mr. STENHOUSE, I have been at the pains to condense them from a very valua ble memoir published by this gentleman in a supplementary number of the London, Edinburgh and Dublin Phil. Magazine and Journal of Science (No. 183, Dec. 1845, p. 533), and herewith offer them to you, with a remark or two of my own, provided they meet your views.

SUBSTANCES.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Silica	45·97	42·90	46·46	41·37	46·48	50·00	45·13	17·64	26·38	52·20	48·73	54·59
Phosphoric acid	3·76	7·99	8·23	4·59	8·16	6·56	4·88	7·37	6·20	13·04	2·90	8·01
Sulphuric acid	6·66	10·94	4·65	10·93	7·52	6·40	7·74	7·97	6·08	3·31	5·35	1·93
Lime	9·16	13·20	8·91	9·11	5·78	5·09	4·49	2·34	5·87	10·64	11·62	14·36
Magnesia	3·66	9·88	4·50	6·92	15·61	13·01	11·90	3·93	5·48	5·63	5·61	5·30
Potassa	25·50	12·01	10·63	15·99	11·93	13·69	16·97	32·93	31·21	10·09	7·46	11·14
Soda		1·39			0·57	1·33	1·64			0·80		
Chloride potassium	3·27		7·41	8·96				10·70	11·14		16·06	0·84
Chloride sodium	2·02	1·69	9·21	2·13	3·95	3·92	7·25	17·12	7·64	4.29	2·27	3·83

Nos. 1, 2, 3 and 4 were very fine, full-grown canes from Trinidad, consisting of stalks and leaves, but without the roots; Nos. 5, 6 and 7 were similar canes from Berbice; No. 8 from Demarara; No. 9, of full-grown canes, but with few leaves, from the island of Grenada; No. 10 from Trelawny, Jamaica, consisting of transparent canes in full blossom, grown about six miles from the sea and manured with cattle dung; No. 11, of transparent canes from St. James's, Jamaica, growing about two hundred yards from the sea, being old rattoons, and also manured with cattle dung; No. 12, young, transparent canes three and a half miles from the sea, and manured with cattle dung, guano and marl.

From these analyses, it appears that the cane for successful cultivation requires a very large quantity of silicate of potassa and also a considerable amount of the phosphates. Few cultivated plants, except the cerealia, require so much. Wheat, or any of the cereals, necessarily causes the removal of a portion of the valuable inorganic constituents of the soil, such as the alkalies, phosphates, &c. which can only be returned to it indirectly; but with sugar the case is quite otherwise. Sugar is a purely organic substance, consisting of carbon and the elements of water, all of which can be derived from the atmosphere, and contains neither alkalies nor phosphates; so that if the ashes of the canes were carefully collected and returned to the soil in an available state, there is no reason why cane might not be grown upon the same lands almost indefinitely.

In the West Indies, where wood is scarce, the crushed canes are employed as fuel, under the coppers of the boiling-house, to concentrate the syrup, and as the heat required is great, a large amount of the silica and the alkalies present is converted into a hard, insoluble glass, which in this form being useless, is thrown away. We can therefore readily understand the reason of the rapid exhaustion of their sugar-lands, and the comparatively slow wearing out of those in Louisiana, where from the abundance of wood, the cane-trash is never thus employed, and where in addition to the inorganic ingredients of the cane, the soil receives (at least where the plantership is what it ought to be) the almost equally valuable mineral constituents of the wood itself.

Yours, very obediently, CHARLES UPHAM SHEPARD.

LONGEVITY IN HORSES.—The Marquis of Ramecroix has just lost an Arab mare, by death, which was sixty-three years old, but which of course had long been useless. Mr. Jesse Hill, of Cheddar, the steward of the Marquis of Bath, has a mare he is ready to prove to be in her fiftieth year. She is daily used in harness, her chief food being bran, potato rinds and grass.

A PLEASANT VISIT TO AN EMINENT FARMER.

The writer of the following, with whom we ought to be acquainted, having been in constant personal intercourse with him for nearly threescore years, allows us to transfer it, with such corrections as may be necessary, to the pages of The Farmers' Library; and as he says we were of the party, we dare not deny it, but confess the corn! Were we to add a remark or two of our own, the result of some agreeable personal intercourse with excellent, plain, practical farmers in the neighborhood of Saratoga, we should feel bound to indicate two glaring defects in the habits and management of most of them. Reader, do you wish to know what these are? We will tell you: They don't (some of them) provide themselves with *ice-houses*, which they might do so cheaply with so much satisfaction and profit; neither do they ever nib a pen in the way of *keeping accounts of outlay and income!!* Need we dwell upon the improvident and reproachful omission in both cases! No; it is too obvious. Where so much ice-cream is eaten, the *farmer* should supply it ready-made to the hotels, as they do near Philadelphia. But only think of sensible and otherwise well managing, economical and industrious farmers, even Presidents of Agricultural Societies, having *no ice-houses, and keeping no accounts* of income and expenditure!! But our object is to introduce a narrative—not to write an essay! We will only add to the testimony of our correspondent, that this President in his shirt-sleeves entertained us gracefully, cordially, and with an animated, well-informed and highly interesting conversation, on his part, on the various branches of his business. His family are all of the *"peep o'day boys" stock;* and every department, eating, and sleeping, and rising and working, all proceeds with *uniformity* and therefore with certainty as to results—three horses, in nice order, to do the work through the week and take the family to meeting on the Sabbath.

From the Saratoga Republican.

A VISIT TO THE PRESIDENT OF AN AGRICULTURAL SOCIETY, WITH AN ACCOUNT OF WHAT OCCURRED—INTERSPERSED WITH SOME REFLECTIONS BY THE NARRATOR—ALL CONTAINED IN TWO LETTERS, OF WHICH THIS IS

NO. I.

"I like to be particular."

Saratoga, 28th August, 1846.

Mr. Editor: Happening to be present on occasion of a chance visit, a few days since, to the President of an Agricultural Society in —— county, N. Y., a brief relation of what transpired may, to your southern readers, serve to lift the curtain on the life and habits of northern farmers. The office of President of a society for the improvement of the noble art of Agriculture, under the patronage of the Empire State, warrants the presumption that the host on this occasion is above the average standard in personal consideration and intelligence, and quite up to it in style of living. To proceed:

Two gentlemen, on an equestrian excursion from "the Springs," for the sake of exercise, and to take a look at the country roundabout, stopped near an antiquated, very ordinary-looking dwelling, on the road side, and inquired respectfully of a lady at the door, "Pray, Madam, can you inform us where Mr. C—— lives?" for they had heard of him as the Rural Philosopher, or Klyogg of the neighborhood. "Yes, sir," was the polite answer; "this is his residence, and there he is himself, at work in the field," pointing to a hill-side meadow, which he afterward told us had been sowed over and harrowed down to timothy by his father, fifty-two years ago,* and from which a crop of hay had been taken every

[* We have since learned, in the neighborhood of Lebanon Springs, that it is no uncommon thing to mow the same meadow fifty years or more in succession. This explains, in part, the uniformly high price of these lands; for the greater part of them, upland and lowland, is laid down to grass, with which they combine sheep raising and dairy husbandry. When a man buys one of these farms, he knows that, without cultivation, every acre will yield a certain amount of a salable commodity. *Ed. Farm. Lib.*]

year since, without ever having been manured or top-dressed, except last year that a ton of plaster had been divided between it and another lot, which had so added to the bulk of the crop, that this year he will cut "between two and three tons to the acre." In this lot he was at work, with his two sons, of seventeen and nineteen, and two men hired for this particular occasion.

The timothy had been left longer in the field than was designed or proper, waiting for weather that he might be sure, as he said, "to *have* it after making it," meaning that no accident should happen between the mowing and the housing. The process was simply this: as the men went over, making exceedingly close and smooth and beautiful work of it, at the rate of a little more than an acre a day each, his younger son scattered after them with a wooden fork, made on a rainy day, and costing next to nothing. Be that noted, as "straws show which way the wind blows." In the afternoon the grass was to be thrown into cocks, and the next fair day to be spread to the wind, and thence taken to the barn, or rather, in this case, to be *stacked;* for his barn, 36 by 60, 19 feet pitch, was filled to overflowing.

To me it was a highly interesting operation to see these young men, without even stopping to look at us, moving on with their work with so much cheerfulness, alertness and sleight-of-hand, not stopping, as *skulkers* are so apt to do, every five minutes, to consume five minutes more in whetting their scythes, or wetting their whistles.

Seeing that there were two gentlemen, strangers, at his door, Mr. C. came at once to the house, and the strangers introduced each other, when at once, in a way equally removed from boorish awkwardness and unmanly servility, but rather with a natural ease, and even gracefulness of manner, he invited them to alight, to let their horses be fed, or at least to be put away, and to "walk in and refresh themselves."

This man, for he was "every inch a man," who came in his shirt sleeves, from his work in the field, stood about six feet high in his stockings, and weighed about 220 or 30, with a head on his shoulders that would not have disfigured a bust of Cincinnatus himself.

But, sir, it may be well that I should give you the whole *dramatis personæ*. It leaked out that one was the veteran Editor of THE FARMERS' LIBRARY, who founded the old American Farmer, in 1819, and the other an opulent Southern planter, Col. F. W. P., who had a few years since voluntarily retired from Congress, and more recently declined the offer of the first foreign mission abroad, wisely preferring the pursuits and the quiet of the country, with its wholesome exercises and intellectual enjoyments—the true *otium cum dignitate*, most becoming and desirable to an independent American agriculturist.

Well, Mr. Editor, scarcely were they seated in the house, before they entered upon all the operations of the field—the stores of the barn—the secrets of the dairy, and even the contents of the stercorary. You would have been amused to witness the quiet way in which the cosmopolite Editor began to catechize our northern President of an Agricultural Society, the southern planter all the while planting a home-thrust here and there, to make the catechism the more thorough and complete; until the way they wormed his management out of Col. C. was a caution! Of the two interrogators, you could not well say which was in the lead. Both followed up the chase with the eagerness of dogs "running to kill," while he, like a wary old boar of the black forest, or a Numidian lion, kept his pursuers at bay, allowing no vantage to be taken of him. If their questions were rapid and searching, his answers were prompt and full. He gave the gentlemen, with all civility, a "Roland for their Oliver," I tell you! To make a long story short, Mr. Editor, (not very short, the reader will say, after all,) the sum of their inquiry into his agricultural condition and management amounted to this:

His farm, near Lake Saratoga, consists of 100 acres, of which 20 are in wood. His force is made up of himself, his wife, his daughter of 16, and his two sons of 17 and 19 years of age.

With these resources he lives abundantly, increases his crops, improves his estate, and is pushing the education of his children, in winter, rather beyond the common standard. He indulges in a wagon and pair of horses, that work through the week, and take his family to meeting on the Sabbath, and at the end of the year nets from two to three hundred dollars to be added to his capital.

But, to go a little more into detail. His stock of domestic animals, well kept

on this farm of 100 acres, (of which 80 only are under the plow or in permanent pasture,) consists of about 20 hogs, little and big, 16 head of neat cattle, 3 horses, and 50 head of sheep. His sheep yield him an average clip of 3 pounds per head, and the wool is exchanged at a neighboring factory for, or made into cloth and casinet, for his own use; so that there is no outlay on that score. "A penny saved is two pence got," as Poor Richard says. His sheep are, for the most part, pastured on a lot of 10 or 12 acres.

The Editor aforesaid was earnest in persuading him that he would find a great saving in the entire substitution of mules for horses; urging that of all machines on a farm, a horse, especially an idle one, was the *most expensive*, even worse than an idle man or woman, except that though their mouth goes, their *tongue does not;* but with the prejudice against this useful animal, which is universal if not instinctive, throughout Pennsylvania, New-York, and perhaps all New-England, Mr. C. intimated that his family must have a conveyance to meeting, and that neither they nor he would consider it comely or respectable to *drive mules!* Thus, after all, there are points on which you may touch the pride of these northern people, and on which they are as ready as some others, to sacrifice pecuniary considerations for sake of *appearances.* In vain did the Editor, who seemed very *mule*ishly inclined, urge, that in some countries, as in Spain and Portugal, and the Brazils, the use of mules is reserved as an *aristocratic privilege* to noble and royal families. This republican farmer, this American Klyogg considered himself "as good as any nobleman of England." In vain did the Editor tell him that in New-Orleans, where so many men make their living by the use of the dray, they would not have a horse as a present—that he had seen ladies driving mules in their carriages into Augusta, in Georgia, and that he had himself ridden from the residence of the Farmer of Ashland to Gen. Shelby's, in his private carriage, behind a pair of mules, 8 miles within the hour, and without the touch of whip.

All would not convert the President of the Agricultural Society to the use of this despised hybrid. You might as well "pour water on a goose's back,"—while the truth is that, especially with their light land in this county, millions might be saved by using and driving the mule, in place of the shorter lived, more luxurious, more sickly, and most expensive of all beasts—the horse. I could not myself help reflecting on the force of this prejudice, at the sight of a team of frail horses, every day hauling brick into Saratoga from Mr. Denton's, a very industrious and thrifty farmer in the neighborhood; knowing, as I do, how much mules are prized wherever their value is known, especially for that steady, every-day, measured drudgery—such as working in machinery, hauling iron ore, working on canals—where the labor is constant and steady, day in and day out, from year's end to year's end. Ask the Ridgleys, the Ellicots, and the Pattersons, of Maryland, and they will tell you on this point, as General RIDGELY, of Hampton, once did the writer, (your spy on this occasion,) that if you would fit them out, in the commencement of the iron business, with a set of horses, and require them to keep them up by repairing wear and tear, for a series of years, they would not accept them as a gracious gift.

Mr. C. was of the common opinion among people who are not acquainted with mules, that they are very difficult to break, and require to be "broken over again" every once in a while. He seemed surprised when the Editor told him they were much easier than a horse to be broken to the plow or the wagon; and yet more when the southern planter told him that, in the South, all they had to do was to *get them hitched* to the wagon, and *drive them off at once.* For myself, there needed no argument in favor of oxen or mules, for I had read all that had been written by this Editor himself, of the natural history and economy of both, amounting to more than has been said in their favor by any (I was going to say, friend) either living or dead, of these patient and speechless creatures—even to the relation of the story from the writings of Rev. Dr. Sterne, where he recounts how two nuns, deserted by the muleteer, and getting benighted in the mountains, could not persuade the mule to advance another step, until they bethought themselves to have recourse to a certain expedient.

The fact is that the prejudice against mules is like that against snakes—both, perhaps, deducible from scriptural injunctions, one of which says, the heel of the son of Adam shalt bruise the serpent's head, and the other that thou shalt not let thy cattle gender with divers kinds—meaning, perhaps, the horse and the

ass. And yet, how strange that the produce of this unscriptural connection should exceed either of the progenitors in so many qualities that give usefulness to each —in size, strength and activity, excelling the one in longevity, hardiness, surefootedness, caution and self-possession—in traveling over dangerous precipices, so much excelling the nobler of the three. After all, give me a mule for being "rough and ready" to work at all times, and to last next after iron. NEMO.

THE RIGHT WAY TO MANAGE A FARM.

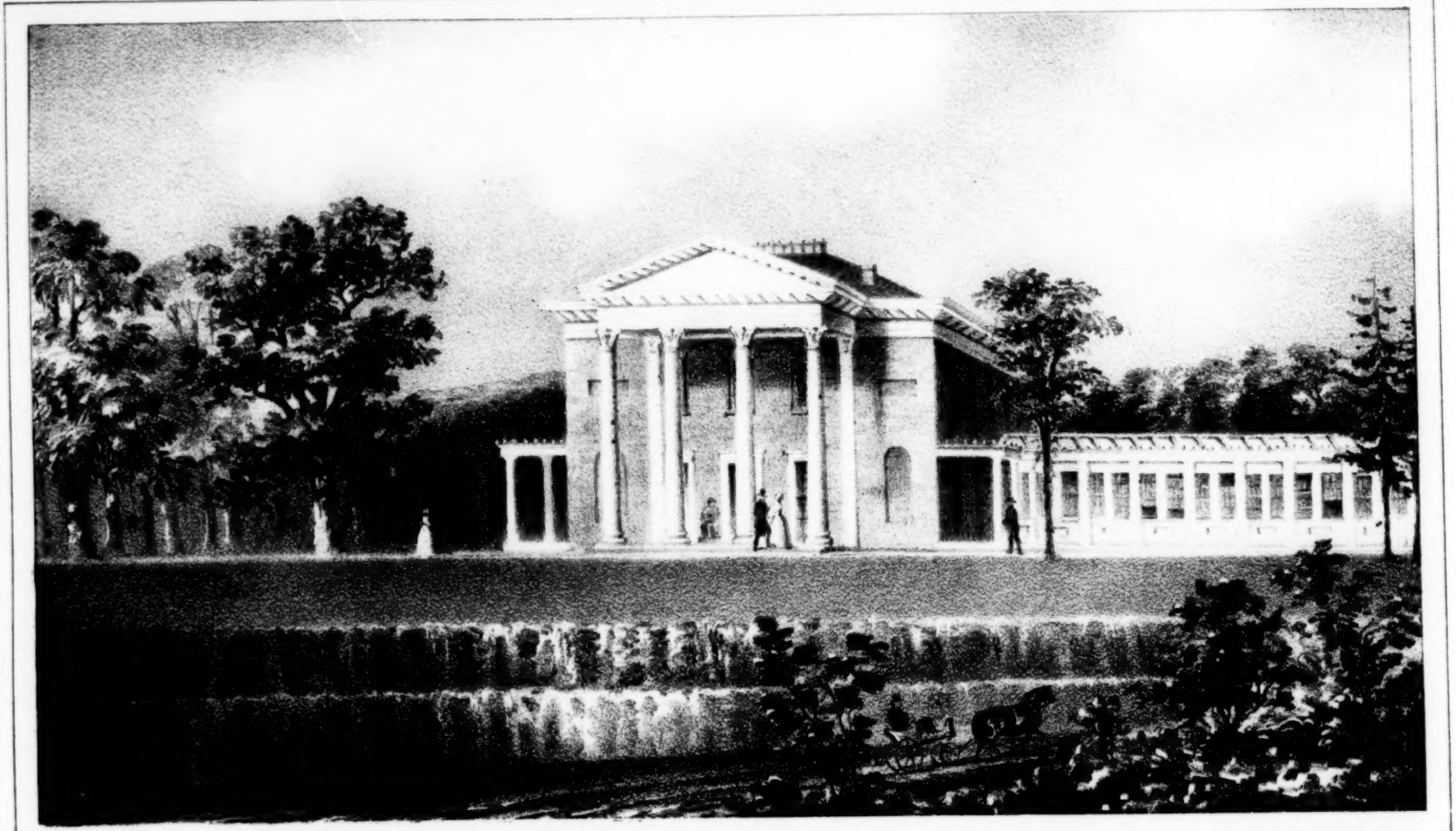
To the Editor of The Farmers' Library: CHARLESTON, August 15, 1846.

Dear Sir: Having just read the communication of "S. B." in your July No. I take the liberty of presenting you with an *oasis* which the admirer of scientific planting may meet with in his route across the *desert* laid down by S. B. In the summer of '45, while wending my winding way through South-Western Georgia, I had the misfortune to lame a valuable horse while crossing one of the "*corduroy*" *bridges* indigenous, I believe, to that region. It was four miles to the nearest plantation in my rear, and nine to the next in my route; so I shouldered my saddle-bags and took the *back track*, leading my horse. The place to which I was now *backing*, I had but a short while previously passed, but not sufficiently contiguous to enable me to form any conjecture as to the chance of my being enabled to obviate the "phix" in which I was placed.

I reached my destination about noon, and found the proprietor just in from the labors of the forenoon. The good taste displayed in the different buildings, &c. which presented themselves to my view, notwithstanding they were constructed of *logs*, gave me considerable hope that I should not be long detained on my travels. Upon making known my situation, I ascertained that my only chance to purchase another horse would be up in Americus, 27 miles distant—to which place the proprietor happened to be going in the morning, and kindly offered me a seat in his buggy. By this time the melodious peals of the dinner-horn saluted my auriculars, and the pugnacious condition of my gastric functions made an invitation to *pot-luck* peculiarly interesting, and not to be declined—for *here* I felt assured that cow-peas, corn-bread and ham were not the order of the day.—Arrived at the domicil, and our ablutions performed, I was escorted by my host to the dining apartment—a commodious shed, erected for summer use, under the wide-spreading boughs of an ancient oak—where I was introduced to the landlady, whose fine personal appearance drew from me my best city bow and salutation, which was returned with such dignity and lady-like composure as to put me at once upon my Ps and Qs. The dinner I found most excellent, and of a variety that would have flattered the most fastidious *gourmand*.

After dining, my host invited me to a stroll through his *grounds*, which, he informed me, contained exactly 75 acres under cultivation. Passing the garden, 2 acres, I noticed flowers, shrubbery, and vegetables, of every variety, blending in beautiful contrast, and exhibiting a skill that I had noticed in no other garden. The different *patches* of corn, cotton, peas, potatoes, &c. &c. &c. presented a neatness of cultivation and luxuriousness of growth that I never before observed, even in the fancy farms of the North. Expressing surprise at the small quantity of land in cultivation, for his force, he informed me that he planted fully as much as could be properly tended. His products, however, were astonishing. His yield of corn was, the past season, 65 bushels to the acre, and the growing crop would be much larger. I do not now remember the yield of cotton, but it was very heavy. I have seen nothing in Mississippi or Louisiana to come up to it.

His barn, stables, mill, gin-house, &c. were upon a new plan to any I had seen. The different *manure bins* showed that this article claimed particular attention, and the proprietor informed me that he never cultivated more land than he could keep well manured; and that, notwithstanding the smallness of his plantation, his crops would outmeasure many of his neighbors' who cultivated four times the quantity. Amid all my travels through the States, I have never found an individual who appeared better informed upon all points relating



O. T. Sanford del

G. & W. Endicott Lith. N. York.

ROSWELL HOUSE,

MANSION OF R. L. COLT, OF PATERSON N. J.

New York Published by Greeley & Mc Elrath for the Farmers Library J. S. SKINNER Edr.

to planting. Instead of adding field to field, his plan had been to make one acre do the producing of five of the ordinary planters that I had met with. He had straw-cutters, corn-shellers, plows, harrows, &c. of the newest and most approved kind; raised everything that he consumed, as far as the production could be obtained.

But I shall weary you. When I returned to this city, I noticed, at *Head's*, your valuable periodical, to which I subscribed, and I send it to my Georgia friend every spring and fall, by his most contiguous merchant. He is, however, ignorant of the donor. I am now on the second volume, and he, no doubt, makes admirable use of the many facilities it offers. He is a model planter, and it is to be regretted that he has so few associates. If his system was universal at the South, we should be the richest and most happy people on the globe. But while our planters go on adding field to field, paying no attention to the improvement of their soil, I see nothing to prevent the South, in a few more years, becoming a waste, howling wilderness.

Yours truly, CHS. FOSTER.

☞ It would appear that nothing can sufficiently impress upon farmers the importance of the system pursued by the farmer here alluded to; whereas one would suppose that the obvious saving in the item of labor alone, between cultivating one acre and cultivating three to reap the same product, would of itself be sufficient to make any man of common sense as reluctant to waste, or, which is the same thing, fail to collect manure, as he would be to pull out of his pocket and *throw away the worth of it in money!* [*Ed. Farm. Lib.*

ROSWELL HOUSE,

GROUNDS, TREES AND FLOWERS.

Not as a model to be rashly imitated by those who are, nor to excite the envy of those who are not, able to build such magnificent establishments as the Roswell House, at Paterson, N. J., have we presented a view of it; but to show, as poor ill-fated Sam Patch used to say, that in our country, too, "some things can be done as well as other some"!

True, it is written that man shall make his bread by the sweat of his brow; but, as we opine, society would make slow progress in civilization, if it were requisite that every mother's son of us should be eternally at the laboring oar. Of all men, in whatever condition, none is to be more contemned, perhaps we should rather say pitied, than your constitutionally *idle man!* with no disposition, or, it may be, necessity, for physical exertion, and with a mind too rude, or too barren, for any sort of cultivation or enjoyment. Still, we are no admirers of, neither can we join company with any one in traveling back to that state of uncivilized existence, wherein every living creature is compelled to hunt, to fish, to milk the cow or the kid, or to *starve*. We are rather of the opinion with the author of the "Vestiges of Creation," who thinks it necessary for civilization that a portion of the community should be placed above hard and engrossing toils. Man's mind is subdued, says he, like the dyer's hand, to that it works in. In rude and difficult circumstances, we unavoidably become rude, because then only the inferior and harsher faculties of our nature are called into exercise. When, on the contrary, there is leisure and abundance, the self-seeking and self-preserving instincts are allowed to rest, the gentler and more generous sentiments are evoked, and man becomes that courteous and chivalric being which he is found to be, among the upper classes of almost all civilized coun-

tries. We incline with him to the opinion that among the things requisite to the improvement of the arts, and a high degree of civilization, are a set of elegant homes, ready and sumptuously furnished, with luxurious stores and appliances of all kinds, and above all, as he says, complete social enginery—in other words, strong laws, and a strong and honest disposition of executive power, to enforce them, to give the *most unquestionable security to life and property.*

We hold nothing to be more pernicious than a jealousy of the poor toward the rich, whose fortunes, acquired generally in this country by industry, give those poor employment; nor any more worthy to be regarded in the light of mad dogs, than demagogues who would appeal to or excite their animosity against those whose capital creates demand for their labor.

But truly we hardly know how Roswell House should have drawn from our pen such a train of reflection, for we meant only to give a picture of an imposing, capacious, and hospitable mansion, and to *recommend the grounds to general imitation.* And *why?* Because they combine what every where indicates good and salutary taste, and one which at once shows and promotes the best sort of affections—to wit, *the love of beautiful trees, and choice fruits, and various flowers*—a taste which has been almost common to good and great men from the days of Virgil and of Spenser to the present.

See, in the following lines from the latter, how, better even than some practical farmers, he understood both the habitation and uses of many of our forest trees:

"And forth they passe with pleasure forward led,
Joying to hear the birds sweete harmony,
Which therein shrouded from the tempests dred,
Seemed in their song to scorn the cruel sky;
Much can they praise the trees so straight and high;
The sayling Pine, the Cedar proud and tall,
The vineprop Elm, the Poplar never dry,
The builder Oak, sole king of forests all,
The Asper, good for staves, the Cypress, funeral.

"The Laurel, meed of mighty conquerors
And poets sage, the Firre that weepeth still,
The Willow, worne of forlorne paramours,
The Eugh, obedient to the bender's will,
The Birch for shafts, the Sallow for the mill,
The Myrre sweet bleeding of the bitter wound,
The warlike Beech, the Ash for nothing ill,
The fruitful Olive, and the Platane round,
The carver Holme, the Maple sildom inward sound."

The gentle reader will excuse only two more lines, and these from his own the great poet of Agriculture, VIRGIL:

"Fraxinus in sylvis pulcherrima, pinus in hortis,
Populus in fluviis, abies in montibus altis."

Connected with Roswell House are 95 acres of land, 62 of which are included in one lot, surrounded by a stone wall, and *Maclura* hedge, or board fence, with *no division fences.*

It would not be easy to conceive a ruder and more unmanageable piece of ground than that was which is now occupied by this superb mansion, and the ornamental and fruit trees that adorn and enrich it. A black alder swamp, of five acres of mud and quick-sand, has given way to two large ponds or miniature lakes, where swans, which, according to an old notion, "cannot hatch without a cracke of thunder," are ever sporting their graceful forms.

Between these two ponds there is a fall of five feet, of which Mr. C. took advantage, by raising a dam, and placing a wheel of eight feet diameter, to put in motion, by the flow of the upper pond, a forcing-pump, supplied not from the

pond, but from a well at the wheel-house, with the purest spring water, which is forced to the top of his house, 100 feet above its level; and this supply is equal to all the requirements of his family, his stables and cow-sheds, and to irrigate his garden and grounds.

But what, as we before stated, is most to be admired, in our estimation, is the *number and variety of trees* which have been added to the few white and black oaks, and chesnuts, that stood at the foot of the hill when he commenced the improvement of this rude and ill-shapen piece of land. If the reader should ask why we have taken the space occupied with a not quite perfect list of these, the answer is ready. This is a beautiful species of improvement, which almost any farmer may imitate; while many of them fail, even in that simplest and cheapest, if not most agreeable of the cardinal duties of life—for they do not even "*plant a tree.*"

These trees planted by Mr. Colt are all in the most flourishing condition, but not without care and attention. Children won't thrive that are not *sometimes* fed, combed, and washed. One of them, however, the Linden, (*Tilia europæa,*) seems to have attracted the bitter enmity of an insect borer, that with his saw encircles the young branch in the neatest possible manner, leaving just enough at the heart to hold on until broken by the first breeze that shakes it—just as false friends drop off and disappear when misfortune threatens or slander assails their benefactor.

Besides these, there are several hundred fruit trees, imported from England and France—such as pears, plums, apples, and peaches—in addition to some 1500 of Mr. C.'s own raising, or procured from Rochester, Cincinnati, or Boston, of the choicest varieties.

In vineyard, in open ground, there are 700 choice European vines, of the best kinds, besides 300 of the best European grapes, which are cultivated according to the Thomery plan at Fontainbleau, where the best grapes are produced for the Paris market; and he is now putting out 700 to 1000 more. He raises a choice collection of grapes under glass, and his supply of black Hamburghs, Victorines, black and white St. Peters, Muscat of Alexandria, Frontinacs, and "Cambridge Botanical Garden," will yield him, it is estimated, more than 1000 pounds of as fine grapes as are raised in this country; and, using the Yankee's privilege, he guesses he will have from out-door vines over 5,000 pounds of similar grapes.

He finds *whale-oil soap suds*, 1 pound of soap to 15 gallons of water, the best wash for fruit trees. It kills all kinds of vermin, opens the pores of the bark, and makes it smooth and healthy; and, if a quart of it happens to run down to the roots, so much the better. For protection of his peach trees, he first cuts out the enemy at the root, and then paints the rascals' damaged and vacated quarters with *gas tar.* This proves, likewise, an excellent protection to the Mountain Ash, which is also liable to attack and depredation at the same point. This Mountain Ash, by-the-by, is one of the enviable boasts of this northern country. We are not aware that it flourishes south of the Chesapeake.

Mr. C. has near half a mile of luxuriant hedge of the Osage Orange, (the *Maclura aurantiaca,*) which he much prefers to all other plants for hedges, and which is so much admired at Mr. CUSHING's celebrated villa, near Boston. He agrees with Gen. Dearborn, in thinking the Buck-Thorn the next best.

Experiment is being made at Roswell House with the Cherokee Rose, (not the least of the many good and beautiful boasts of the sunny South.) It might

have been well to have ascertained the result of those which we procured to be planted, many years ago, at Green Mount, then the hospitable residence of the late ROBERT OLIVER. Forever honored be his memory for his public spirit and benevolence!

The green-house, as shown in the accompanying sketch, is in dimensions 80 by 37 feet, with a forcing-house 35 by 14, and filled with a variety of fine plants, but not equal in rarity or variety to Mr. Manice's, on Long Island, or to professional collectors and cultivators—as he raises only to exchange or give away, which is done to his friends with a lavish hand, saying, as the liberal man who can afford it always does to his friend, "what is mine is thine."

For reasons that do more credit to his feelings than his arborical taste, Mr. C. professes to take most pride in his *Horse-Chesnuts*, which he raised from the nuts, and planted with his own hands in 1794.

And now, having very hastily, for want of more time, given a sort of outline sketch of Roswell House and Grounds, should the cynical reader demand *cui bono?* for what good? we repeat that those who have money to lay out in a delightful residence may have the benefit of its plan, or beat it if they can.—While the many are too lazy, few are so poor but they might turn to advantage such a beautiful and praiseworthy example of taste and perseverance in the simple and elegant arts of arboriculture and horticulture, as we have here presented; though we regretted not to find, in a collection so extensive and well-chosen, the Tamarac or Hackmatac, (*Larix americana*) which abounds in the neighborhood of Lake Saratoga, and which, to our taste, is the prettiest of the Pine family.

For a better description, we might have referred to one which we remember to have seen in that excellent journal, the AMERICAN AGRICULTURIST, but have not the volume that contains it.

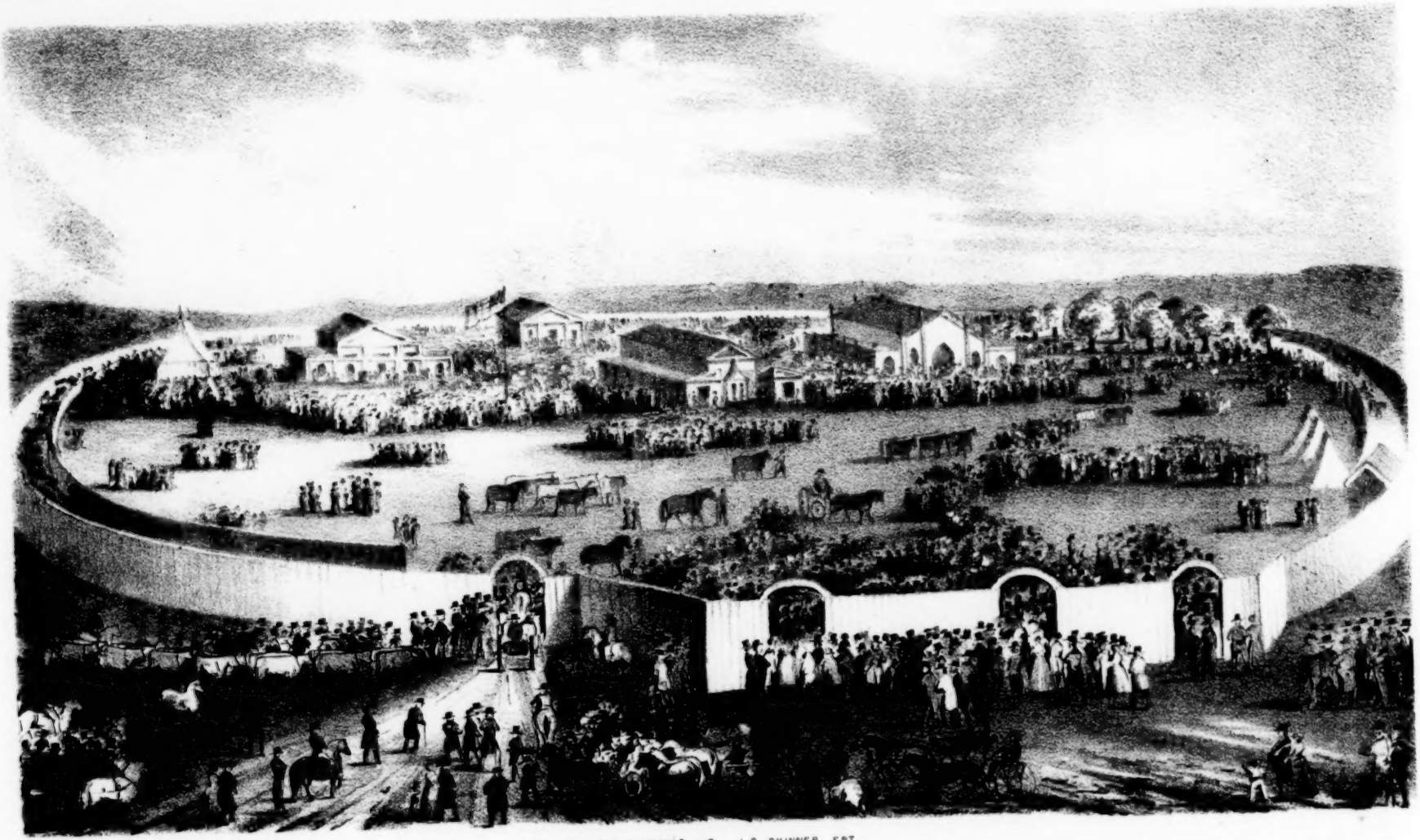
LIST OF TREES GROWING ON THE GROUNDS OF ROSWELL HOUSE,

NEAR PATERSON, N. J.

With their common and botanical names.

English Oak, (*Quercus robur.*)
" Sycamore, (*Acer pseudo-platanus.*)
" Linden, (*Tilia europæa.*)
" Walnut, (*Juglans regia.*)
" Yew, (*Taxus baccata.*)
" Elm, (*Ulmus campestris.*)
Dutch Elm, (*Ulmus c. major.*)
Scotch Larch, (*Larix europæa.*)
Norway Spruce, (*Abies excelsa.*)
Weymouth Pine, (*Pinus strobus.*)
Cedar of Lebanon, (*Cedrus libani.*)
Indian Cedar, (*Cedrus deodara.*)
Imperial Paulownia, (*Paulownia imperialis.*)
Mountain Ash, (*Pyrus aucuparia.*)
Weeping Ash, (*Pyrus a. pendula.*)
Copper-leaved Beech, (*Fagus sylvatica cuprea.*)
Purple or Blood-leaved Beech, (*Fagus s. purpurea.*)
Irish Yew, (*Taxus baccata fastigiata.*)
Laburnum, (*Cytisus laburnum?*)
Ailantus, (*Ailantus glandulosa.*)
Abele Tree, (*Populus alba.*)
Spanish Chesnut, (*Castanea vesca.*)
French do. do.
Sugar Maple, (*Acer saccharinum.*)
Soft Maple, (*Acer eriocarpum.*)
American Elm, (*Ulmus americana.*)
Weeping Elm, (*Ulmus a. pendula.*)
Slippery Elm, (*Ulmus a. fulva.*)
Common Willow, (*Salix alba.*)
Weeping Willow, (*Salix babylonica.*)
Weeping Birch, (*Betula alba pendula.*)
Button-wood Tree (*Platanus occidentalis.*)
Catalpa, (*Catalpa syringæfolia.*)
Black Spruce, (*Abies nigra.*)
Hemlock Spruce, (*Abies canadensis.*)
White Pine, (*Pinus strobus.*) Same as Weymouth Pine.
Balm of Gilead, (*Picea balsamea.*)
Arbor Vitæ, Chinese, (*Thuja orientalis.*)
" American. (*Thuja occidentalis.*)
Holly, European, (*Ilex aquifolium.*)
Large-flowered Magnolia, (*Magnolia grandiflora.*)
Glaucous-leaved do. (*Magnolia glauca.*)
Cucumber Trees, (*Magnolia macrophylla? cordata?* &c.)
Chinese Magnolias, (*Magnolia conspicua; purpurea, gracilis;* &c.)
Black Walnut, (*Juglans nigra.*)
White Hickory-nut, (*Carya alba.*)
American Chesnut, (*Castanea vesca americana.*)
Butternut, (*Juglans cinera.*)
Wild Cherry Tree, (*Cerasus virginiana.*)
Persimon Tree, (*Diospyros virginiana.*)
White Mulberry, (*Morus alba.*)
Black do. (*Morus nigra.*)
Chinese do. (*Morus alba sinensis.*)

NOTE.—The botanical names as given above are in accordance with the system adopted in Browne's Trees of America—which we heartily recommend to every one who professes, or who would have his family contract, a fondness for this beautiful branch of rural study and recreation.



LITH. FOR THE FARMERS LIB. J.S. SKINNER EDT.

D.T. SANFORD DEL.

C.& N. ENDICOTT LITH. NEW YORK.

AGRICULTURAL FAIR AT AUBURN.

THE STATE FAIR.

THE necessity of sending the sheets of this work to the stereotyper to be cast, if possible, before the 20th of the preceding month, offers an explanation which may serve us with correspondents generally, and will account for the crudeness of the little we can say in this number as to the late State Fair at Auburn.

If superb weather, and an immense concourse of people, with a beautiful site and ample arrangements for the exhibition, could confer on it the character of usefulness, and indicate progressive improvement in the various branches of agricultural industry which those exhibitions are designed to benefit and exemplify, then may the friends of the cause congratulate themselves that the great object of these State expenditures, and of the pains taken by the officers of the State Society, is in a fair way of being realized. Not so sure, however. are we of that result, when we come to analyze the motives of the immense crowds that attend, and the materials of which these exhibitions are generally made up.

We had hoped to receive, through some channel, an official statement of the list of prizes, such as might have been with confidence recorded and referred to; but on examination of the account which, of all we have received, seemed to wear the strongest aspect of authenticity, we find it so full of errors that we have determined to postpone, for the present, what it may be desirable to preserve as a record of proceedings sanctioned by official authority.

The account to which we have referred, in an Albany paper, states, for example, that Messrs. Corning and Sotham obtained premiums for their *Durham* cattle—whereas they had no Durham cattle on the ground; and, farther, that Mr. VAIL, of Troy, and Mr. HYATT, of Rochester, got premiums for their "imported" cattle. Now, Mr. Vail got the first premium for his imported improved Short-Horn cow, the beautiful Lady Barrington—of whom we have a perfect likeness; but Mr. Hyatt's premium was for a heifer of the Hereford breed, from Mr. Corning's fine herd of that race of cattle. Of Mr. Corning's Hereford prize cow we have also a portrait, taken at our instance—having selected her for that purpose, as a fair specimen of Herefords, before the exhibition. Portraits have also been secured of CHAMPION, the superb prize colt, property of Mr. GRINNELL, which trotted his mile at 2 years old in 3m. 5s.; also of the fine Morgan horse from Vermont, as well as of other animals. Mr. Grinnell has secured the appearance of Champion in an early number of the Monthly Journal of Agriculture; so has Mr. Corning of his prize cow; but what other animals will be so distinguished will depend on the pleasure of their owners, and other circumstances. It may be well at once to state that, for no consideration, can inferior animals, or coarse and bad representations of the best, get admission to this work. The terms of subscription, though low in proportion to its costliness, are too high to *admit of that;* and, besides, the publishers have some pride in their design to illustrate the various arts employed in the publication of the work.

But as to this exhibition, and all of its kind—it is not numbers of people, nor costly arrangements, nor excellence of a few things or animals, imported or otherwise, that can impart to them the character of public usefulness, or give promise of regular, general and permanent improvement. We must look more at the

character of those in attendance, and whether they constitute the bone and sinew—the staple of the agricultural community of the State; and whether the animals and other things produced go to show that the farmers generally have taken hold and embarked heartily in the cause, with a conviction of the utility of these shows and with a determination to excel in the various branches of industry in which their capital is embarked and on which their labor is bestowed.

Contemplating the Auburn exhibition in this light, the question is, whether it demonstrated a general and praiseworthy spirit of rivalry, and a marked advance in a way to assure us of continued and general melioration of agricultural life and pursuits. In the first place, it is a source of unfeigned pleasure to testify that in the most important department, agricultural implements, there were abundant proofs of zeal and ingenuity on the part of those who devote their genius and labors to these objects—which we the more readily denominate as the most important, because some of them, as the plow and the harrow, lie at the bottom, and serve, as it were, as the entering wedge to all agricultural operations; and all of them are designed to achieve that great desideratum in our country—*economy of labor.* In this branch of the exhibition there was most satisfactory evidence that the *mind is at work*, and that we may hope to realize for Agriculture some degree of that improvement which has been effected in the vehicles and machinery appropriated to commerce, manufactures, and other arts and trades. But even these improvements have been stricken out, not so much by any action of the mind within the circle of practical farmers, as by the stimulus which the wants of Agriculture have applied to the mind of the mechanic—of men who live in nearer communion and rivalry with each other, and who have been brought, by encouraging influences, to *think*—yes, in a word, to *think.* But look again over the field for proofs of improvement in the race of domestic animals, and especially of cattle, so important in the agricultural economy of the State of New-York—emphatically a butter, a cheese, and a beef-growing country! After using every persuasive to prevail on the farmers of the country to bring forward their bulls, and cows, and heifers, of the country breed—offering, year after year, the same premiums as for the various races of imported stock—what is the result? What was the number of competitors? and what were the signs of bulls of better form, and cows of deeper milking properties, or heifers of fairer promise, than might have been gathered up twenty years ago in any five miles square in any part of the State? Let it not be said—we sincerely wish it could be said—that improvement has been pushed to the *ne plus ultra* in that department. Were that true, how should we account for the recommendation of the Committee that these premiums be hereafter withdrawn, on the ground that the *prizes are worth more than the animals to which they are awarded?* What can be the influence under which the farmers of the State generally hold back from this area of honorable and praiseworthy rivalry? Is it that they indulge in an unworthy, or a well-founded suspicion of trickery and management in the bestowment of the premiums? or that they are restrained by a puerile shame to exhibit their best in the same field with imported animals which have been carried to the highest point of improvement that wealth and skill in animal breeding and physiology can raise them? Of the milch cows of "country breed," it might be well to be silent, on the score that the least said is the soonest mended, and leaves less chance of being gored. Still we may venture to wonder why it was that the first premium was given to the mother of "*three twin*" calves! Prolificness in the *hog* is a quality to be promoted, but even in that unclean beast it has

its limit of usefulness—unless, perhaps, it be in Texas, or California, or Oregon, or some of our new territories, acquired, or to be acquired, by hook or by crook—but, for *neat* cattle, we should think one, or at most two calves, would suffice and be as many as the mother could well bring up. We have heard of sows having twenty at a litter; but, rather than encourage such extravagance in pig bearing, we would sooner give a premium to the owner of a sow that should be content with littering eight, provided he would bring them like eight such as we saw a few days since in the piggery of Mr. B. A. Hall, of Lebanon, which will weigh, at little more than 12 months old, about 2,400 pounds!

The display of stallions at Auburn proved, as usual, the most attractive and admired point of the Fair; and truly they were meritorious as they were numerous. Here, again, we trace the immediate connection between competition and excellence, and the hope of immediate gain. The animal is itself locomotive, easily brought to the ground, and the owners have recourse to the Fair as the best theatre for exhibition and sale. Hence the great number to be usually met with, not only here, but on militia parade grounds and at political meetings. But where are the large, roomy, well-bred, fine forehanded, flat-legged, brood mares, that we should expect to find by dozens in the heart of a country so famous as "Western New-York" is, throughout the southern country, for the production of the most showy and the best harness nags? For these we have looked in vain, as indeed for match horses, such as bring, in the middle and southern States, from $500 to $1,000. They must be somewhere; but these Fairs seem not to bring them forth. An exhibition such as we might and had hoped for, of a *large number* of such superior mares and single colts and match horses, would be a most acceptable indication, not only of a *general* spirit of improvement, but of a readiness to take some little trouble and to be at some little expense to promote the patriotic objects of this great State association. But of this proof of a common zeal and a common readiness to coöperate in the public useful objects of these shows, there was no proof at all. The few mares and cattle of common breeds, except oxen, that were exhibited were of such character that we believe the Committee recommended the premiums to be withheld. A better show of mares would be met with at any county exhibition in Maryland or Virginia. So we return again, with pleasure, to remark that the display of stallions was superior to any we have seen in the State. It must be for some very odd and unimaginable purpose that a man wished to breed anything of the horse kind, who could not be suited here, whether in the heavy-bodied dray horse; the huge Cleveland bay; the thin-skinned, courageous racer; the hardy Canadian; the Mambrino trotting stock, or the short-jointed, close-knit, active Morgan horse. All were there, at his command. Of Hogs, we shall only remark that those, if any, who could not be satisfied with such as were there, can easily breed for themselves, even to a given number of white-feet, as pigeons are bred to a feather.

The display of fruit, especially of apples, served to corroborate the proofs, so everywhere abounding, of the suitableness of the soil and climate of New-York to the growth of that fruit, and to make it apparent that the apple crop is worthy of more general attention.

Finally, is it not to be apprehended that in most of the departments where excellence was exhibited, it was rather the fruit of individual exertion, stimulated by gainful purposes, and which would have been elicited under that influence independently of the State Society, or the fruit of a generous and most commendable disposition on the part of importers of cattle, which have been now so fre-

quently exhibited, and by which it was intended to show to the farmers of the country what they might accomplish in the same way if impelled by a real love of their vocation and a desire for excellence and distinction in the prosecution of it?

On the whole, unless the mass of the farmers can be prompted to enter more generally the lists of competition—unless we can show increased production by a more and more skillful preparation and application of manure, with other evidences of general improvement clearly traceable to a closer study of the principles of Agriculture—and as the fruit produced by these Annual Fairs, where, it may be feared, thousands come now to see, as to any other spectacle, rather than to contribute—may not the question begin to be put, whether we should not strike nearer to the root of the evil or deficiency we would cure, by applying a larger portion of the time and the means which are now applied to getting up spectacles, rather to the *dissemination of knowledge*—which, after all is power, and the basis on which all hopeful improvement must rest? General improvement in a great branch of national industry, implies influences deeply seated and widely diffused: it implies change and melioration in the system of education and the habits of thought; and that is not so easily wrought on men advanced in life, any more than espaliers can be made of old trees. It may well be questioned whether greater good would not be achieved by a premium, for instance, for the best essay on the art and principles of draining land—such an one as Mr. Thomas would write; or an essay from Downing on rural architecture; or Audubon on ornithology; or Doctor Darlington on botany; or Anderson on hemp; or Goldsborough on wheat; or Randall on barley; or Harris on entomology; or Seabrook on cotton; or Rost on sugar; or Franklin Minor on practical farming; or Wilder on horticulture—&c. and causing these to be read in every country school, and in every Farmers' Club. It may be doubted whether such dispositions of the funds at command would not lay the foundation of more good than all the premiums that ever were bestowed for large crops, or fat hogs, or cows with *three calves!* It is not with the spirit of cupidity in the old, but with the love of knowledge in the young, that we must deal. By particular ablution we may wash away the dust or insects from the branches of a tree; but if you would have it strike deep root and take firm hold of the ground—if you would invigorate its stem and give it fruitfulness and longevity, you must manure and cultivate *at the root*. So, if we would accomplish a radical and permanent and well-grounded reform in the great industrial interests of society, all effectual efforts to do so must be connected with the intellectual cultivation of the rising generations with reference to these particular interests; and although, as in the case of some accidental influence prejudicial to the fruitfulness of a particular crop, it may be removed, and the crop saved by expedients, yet it would be the hight of folly and empiricism to rely on such expedients for the regular enjoyment of abundant harvests. The juggler may amuse the vulgar by his sleight-of-hand tricks, and fill their minds with amazement and his pockets with their loose change; but the philosopher and the man of sense knows all the while that nothing can break the regular and natural connection between cause and effect, and is eager to see what that connection is in the case before him. A glittering premium may cause any man to stuff his bullock into excessive obesity; but how much more useful to stimulate some man of science, by high and adequate rewards of profit or of honor, to analyze and explain, for common and universal benefit and information, the properties of the

soil on which the corn and the grass grow, and the nutritive properties, again, of the corn and the grass on which the bullock feeds, to the end that through all his operations the young farmer may proceed understandingly—else can he never proceed with the same pleasure or honor, or, with any thing like certainty, to adapt his means to his ends! Who does not know, as the result of experiments a thousand times repeated, what immense crops of corn can be made to grow on an acre—how much wool to grow on a sheep's back—how much milk a cow can be made to yield, and how much a hog be made to weigh? But how few understand thoroughly the principles upon which these results depend, and by what most economical means and processes they can be with certainty accomplished? Have we not, in a word, collected a sufficient mass of facts, and is it not time that we were drawing deductions from them, or, in other words, time that we were looking from effects to causes? Finally, the production of great crops and the exhibition of well-formed animals, and implements of the most perfect structure, are all highly worthy of encouragement—not to show that such things can be produced, but, as demonstrations of problems on the blackboard, to show, at the same time, *how* they have been done! Any fool can tell that if a hen sits three weeks on an egg it will produce a chicken; but it took science to ascertain the degree of temperature—about 100 of Fahrenheit—essential to incubation, and that artificial heat might be made to perform the office of the natural mother, and just as well. When shall we cease to appeal, as a stimulus to improvement, to the baser elements of our nature, and learn that no walk of life opens so many and such entertaining studies as those which lie in his path to charm the *cultivator of the soil*, and to make him establish his natural right to be accounted among the most learned, and, as he ought to be, of consequence, among the most useful and virtuous of mankind? How long shall we suffer all other classes to talk of and to treat us as fools or babies? Let our efforts and our means be applied to the *better education of the rising generation* in the *principles of Agriculture in all its branches*, and to providing well-paid and highly honored instructors and suitable books for all our schools, and for Farmers' Clubs. Thus would we lay a broad and solid basis out of which general and permanent improvement would grow up—improvement founded on pride in their profession, to which an understanding of its principles is always to be implied as essential.—We only say that the time may come when the question will arise, whether it is not better to give this other direction to a large share of our exertions, and to most of the means at our command, and even to the action of the Government, if the Government can ever be brought to act specially for this great interest as it does for others, that live, like horse-flies, on its blood.

We cannot draw these hasty remarks to a close without bearing our humble testimony to the patriotic efforts and designs of all concerned in projecting this exhibition, and to the assiduity and tact of the officers and assistants to whom was consigned the duty of superintending it. We regretted that, for more reasons than one, it was impossible for us to hear the Oration; but we shall read it with the greater attention, and with a pleasure for which we have ample security in the admitted and admired talents and eloquence of the orator.

Without the slightest wish to detract from him or from the obligation conferred by him on the Society, we will only add, that when agriculturists are brought by improved education in direct reference to their business, to a better knowledge of it and of their rights, knowing, they will "dare maintain them;" and will no longer consider themselves obliged to go annually to some member

of a "*learned* profession" to advocate the interests of their own, which thus, by implication, at least, they seem content shall be for ever considered as among the *unlearned!*

If, with some experience, and thirty years of zealous devotion to these subjects, we may be permitted to offer one suggestion in a friendly spirit, we would add that, instead of giving premiums to animals without merit, because they are without competitors, such animals should be stigmatized as unworthy of exhibition and of their race. Several such *prized* animals at this exhibition might be named. At all events, the *number of competitors* in all cases should be stated, along with the awards, as that would serve in some measure to explain that success does not always imply merit. The object of such Societies—especially State Societies—should be not so much to swell the number as to exemplify excellence in things exhibited. If proceedings are not conducted in this spirit of judgment and independence, the public will turn away in disgust from an institution so liable to be ill-directed or perverted.

PRICES CURRENT.

[*Corrected, September 23, for the Monthly Journal of Agriculture.*]

ASHES—Pots, 1st sort	℔ 100 lb.	3 75	@— —
Pearls, 1st sort, '46		4 37½	@— —
BEESWAX—American Yellow		— 26½	@— 27
CANDLES—Mould, Tallow	℔ lb.	— 9	@— 11
Sperm, Eastern and City		— 26	@— 38
COTTON—From	℔ lb.	— 7½	@— 11
COTTON BAGGING—American		— 10½	@— 13
CORDAGE—American	℔ lb.	— 11	@— 12
DOMESTIC GOODS—Shirtings	℔ y.	— 5	@— 11
Sheetings		— 6½	@— 15
FEATHERS—American, live		— 25	@— 30
FLAX—American		— 6½	@— 7½
FLOUR & MEAL—Genesee	℔ bbl.	4 87½	@ 4 93¾
Troy		4 87½	@ 4 93¾
Michigan		4 87½	@— —
Ohio, Flat Hoop		4 87½	@— —
Ohio, Round Hoop		4 75	@— —
Ohio, via New-Orleans		— —	@— —
Pennsylvania		— —	@— —
Brandywine		5 —	@— —
Georgetown		4 75	@ 4 87½
Baltimore City Mills		— —	@— —
Richmond City Mills		6 —	@ 6 25
Richmond Country		4 75	@ 4 87½
Alexandria, Petersburg, &c.		4 75	@ 4 87½
Rye Flour		3 50	@— —
Corn Meal, Jersey and Brand		3 50	@— —
Corn Meal, Brandywine	hhd.	15 —	@15 50
GRAIN—Wheat, White	℔ bush.	1 —	@ 1 05
Wheat, Red	new	— 90	@ 1 —
Rye, Northern		— 75	@— 79
Corn, Jersey and North	(meas.)	— 73	@— 75
Corn, Southern	(measure)	— —	@— —
Corn, Southern	(weight)	— —	@— —
Oats, Northern		— 34	@— 35
Oats, Southern		— —	@— —
HAY—North River in bales	℔ 100 lb	— 35	@— 45
HEMP—American, dew-rotted	ton	75 —	@90 —
" " water-rotted		130 —	@185 —
HOPS—1st sort, 1845		— 14	@— 15
IRON—American Pig, No. 1		32 50	@35 —
" Common		22 50	@25 —
LIME—Thomaston	℔ bbl.	— 75	@— —
LUMBER—Boards, N.R.	℔ M. ft. clr.	30 —	@35 —
Boards, Eastern Pine		11 —	@13 —
Boards, Albany Pine	℔ pce.	— 10	@— 18
Plank, Georgia Pine	℔ M. ft.	27 —	@30 —
Staves, White Oak, pipe	℔ M.	50 —	@— —
Staves, White Oak, hhd		40 —	@— —
Staves, White Oak, bbl		30 —	@— —
Staves, Red Oak, hhd		24 —	@26 —
Hoops		25 —	@30 —
Scantling, Pine, Eastern		— —	@15 —
Scantling, Oak		30 —	@35 —
Timber, Oak	℔ cubic foot	— 22	@— 33
Timber, White Pine		— 15	@— 22
Timber, Georgia Yellow Pine		— 20	@— 22
Shingles, 18 in	℔ bunch	1 75	@ 2 —
Shingles, Cedar, 3 feet, 1st quality		25 —	@— —
Shingles, Cedar, 3 feet, 2d quality		22 —	@23 —
Shingles, Cedar, 2 feet, 1st quality		17 —	@18 —
Shingles, Cedar, 2 feet, 2d quality		15 —	@16 —
Shingles, Cypress, 2 feet		13 —	@14 —
Shingles, Company		— —	@28 —
MUSTARD—American		— 16	@— 31
NAILS—Wrought, 6d to 20d	℔ lb.	— 10	@— 12½
Cut 4d to 40d		— 4	@— 4½
PLASTER PARIS—℔ ton		2 25	@ 2 50
PROVISIONS—Beef, Mess,	℔ bbl.	6 75	@ 7 —
Beef, Prime,		5 50	@ 6 —
Pork, Mess, Ohio		9 75	@— —
Pork, Prime, Ohio		— —	@ 8 25
Lard, Ohio	℔ lb.	— 6½	@— 7½
Hams, Pickled		— 4½	@— 5
Shoulders, Pickled		— 3½	@— 4
Sides, Pickled		— —	@— —
Beef, Smoked	℔ lb.	— 7½	@— 8
Butter, Orange County		— 15	@— 16
Butter, Western Dairy, new,		— 12½	@— 14
Butter, Grease		— 6½	@— 7
Cheese, in casks and boxes		— 6	@— 7
SEEDS—Clover	℔ lb.	— 6	@— 7½
Timothy	℔ tierce	11 —	@15 —
Flax, Rough		8 50	@— 9
SOAP—N. York, Brown	℔ lb.	— 3¾	@— 6
TALLOW—American Rendered		— 7	@— 7½
TOBACCO—Virginia	@ lb.	— 2½	@— 6
North Carolina		— 2½	@— 5
Kentucky and Missouri		— 2½	@— 7
WOOL—Am. Saxony, Fleece,	℔ lb.	— 32	@— 34
American Full Blood Merino		— 27	@— 28
American ½ and ¾ Merino		— 22	@— 25
American Native and ¼ Merino		— 20	@— 21
Superfine, Pulled		— 24	@— 25